ISASC

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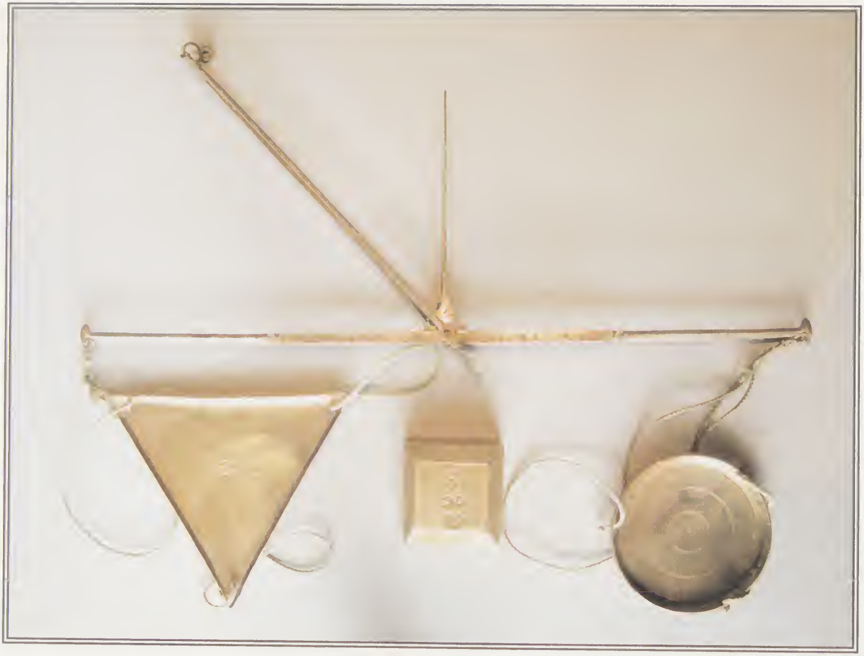

Cover Picture

It is not often that a collector finds an early scale with provenance.

The Jan Van Coppenol coin scale on our cover has a long and rich history. It was made in Dutch Haarlem in the early 1600s, brought to America in the 1680s, sold to the Governor of Pennsylvania in the early 1900's, and now resides with an ISASC member.

Now our readers will know the rich history of one scale's travels and how it came to its modern home.

In this issue you can also find info on Jamestowne's 400th anniversary and the weights found there, Velthoen, and Howard & Co. postal scales, two book reviews and showcase.

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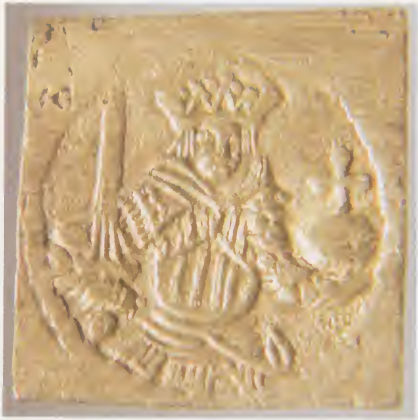
Jamestown at 400: Old World Coinweights in the New World

BY GARY BATZ

The year was 1606. It had been three years since the death of the First Elizabeth, and eight since the death of her long-time antagonist, Philip II of Spain. Ever since her accession to the throne in 1558, she had kept England out of foreign entanglements that were so expensive and unproductive for her father, Henry VIII. Philip, her brother-in-law during his short marriage to her half-sister Mary had even wooed her, alas to no avail. She would remain the Virgin Queen all her life. Yes, there was a late suitor, the French Duke d'Anjou whom she called her Frog, and he might have succeeded had it not been for her people who, as with Philip, showed no inclination to having Catholic kings run their country. Not even the Dutch wanted Anjou as their king. She also declined the Dutch Protestants' entreaties to become their queen, sending instead a small force to assist them against the Spaniards under the leadership of her court favourite Robert Dudley, the Earl of Leicester, in 1586. Efforts to keep supplied the early intended settlers of Virginia near today's Roanoke ended abruptly due to impending war with Spain. All ships were needed to be ready for action and in port to fight off the threat of the Spanish Armada in 1588.

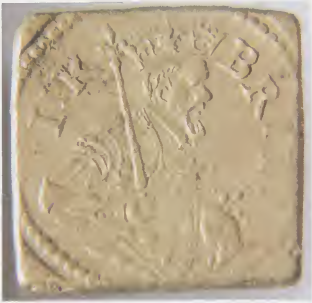
King James I, Elizabeth's cousin, when he ascended the English throne in 1603, had already been king of Scotland as James VI since 1567 at the age of one. He was a Tudor and a Stuart. His mother, Mary Queen of Scots, had been Elizabeth's prisoner till she reluctantly signed Mary's execution warrant in 1587. The Spanish had been in possession of The Americas for more than 100 years. The French had returned in 1603 to the site that would become Quebec City. The fighting on the European continent would soon stop, in anticipation of the Twelve Years Truce of 1607 between the Protestant Dutch and the Catholic Spaniards, freeing English soldiers of fortune who had volunteered to fight with the Dutch to return home and seek their fortune elsewhere.



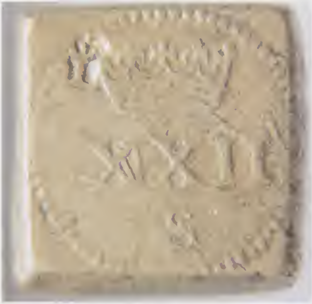
Weight J 1. / / Gold Reaal Antwerp.

James who had sympathy for the English Catholics and had tried to relax the penal laws, by which they could be imprisoned or fined, found that opposition in Parliament had changed his mind. Soon a number of them, among them Guido (Guy) Fawkes who had done service in the Spanish army, planned to blow up the Houses of Parliament. In late 1605 their plans came to naught as one of the conspirators warned his brother who was a member of parliament. Being Catholic or not became one of the criteria of success in England and elsewhere.

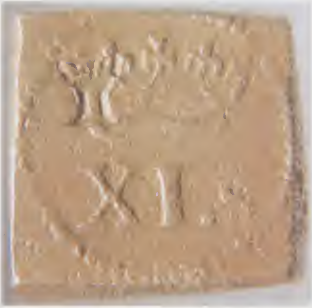
King James granted the charter of the Virginia Company to a number of adventurous merchants whose purpose was to build up a profitable commercial and agricultural community, and also to hold the country against Spain. The 108 gentlemen and boys who embarked from Blackwall downriver from London on their adventure in December 1606 traveled longer than the usual time it took to cross. They first landed at Cape Henry in Virginia and, deciding this was not a suitable site, went north to the mouth of the James River. They had orders to settle away from the influence of the tide and the Spanish, and eventually decided on an island at a bend in the river, some 30 miles upstream. On May 14, 1607, after five months of sailing, the three ships



Weight J2 & F3. ▲▲ One Unite Withers 486.[a][1a].
Weight J2 & F3. ▼▼ One Unite Withers 486 [b].



Weight J3. ▼▼ Half Unite Withers 506 [b]



under Captain Christopher Newport dropped anchor at Jamestown Island. One hundred four landed and almost immediately began to build a fort, by the river, for protection from the Spaniards and Indians.

Captain John Smith (later of Pocahontas fame) who had been clapped in irons for most of the trip was revealed to be of one the governing council members when the sealed orders were opened. His name has become almost synonymous with that of the settlement. He became the head of government in 1608, governed with firmness and ability, built a church and prepared for more extensive agricultural and fishing operations.

Historic Jamestowne is the site of the first permanent English settlement in America. The site is jointly administered by the Association for the Preservation of Virginia Antiquities and the National Park Service[1].

Looking for coinweights on the internet in August 2001, I discovered Weights J1 and J2 on the Jamestowne Rediscovery website. The next day I wrote to APVA (Association for the Preservation of Virginia Antiquities at Richmond, VA) and immediately connected with Beverly (Bly) Straube, the senior conservator. We had a lively exchange of information by email. On September 6, I arrived at Williamsburg to revisit there as well as at Jamestown, but at the latter now with a special mission, to discover more about the weights. I met Bly but the weights were still "in conservation" and I could not see them. That was a bit disappointing.

The following week, I saw the William Poyntell scale box at Washington's National Numismatic Collection with curator Douglas Mudd, dozens of scales and weights at another location in the same American History building (curator Diane Wendt), and on the morning of September 11, I examined a coin scale allegedly owned by George Washington, while "The Attack on America" was underway in Washington, New York and Pennsylvania. Once the news was out, after my visit to George Washington's home and farm had concluded without interruption, I made a fast getaway, one day early, as all the museums closed immediately.

Coinweights, it seems, might not be a suitable item to bring to the wilderness, nor would they be needed for trade with the Indians or the Spaniards. However, in light of other finds of even less suitable objects, another reason must exist for their being brought along. So far The Diggers have unearthed, especially near the west side of the fort, such luxury items as Chinese porcelain cups, a Saint James scallop shell silver seal matrix, a telescope lens, a silver putto, a signet ring with the initials EL (for Queen Elizabeth?) and coat of arms, a silver seal with a skeleton holding hour glass and spear and the initials LF and other items that would make a gentleman stand out and be recognized as such. The most hilarious find of The Diggers is a combined ear and tooth pick in silver, its ends protruding from the body of a water creature. A gentleman, so their story goes, would carry it outside on a chain suspended from his belt. The luxury items found at the west side of the fort indicate the people there were of relatively high social standing. It seems there existed separate classes, those of high rank and others. These finds and others of a more general nature are described on the website www.historicjamestowne.org/the_dig.

In short, a gentlemen's accoutrement in America included everything he would have owned or worn in England. This would include his coin scale and weights. Boxes for the weights, if such were used, will likely never be found unless they were tossed in a well and remained preserved under water all the time or in a dry place starved of oxygen. Scale pans made of brass have yet to be found. Scale beams made of steel would have disintegrated. Coinweights made of brass, a compound of copper and zinc, are relatively impervious to acids but often they are covered by salts from minerals in the ground.

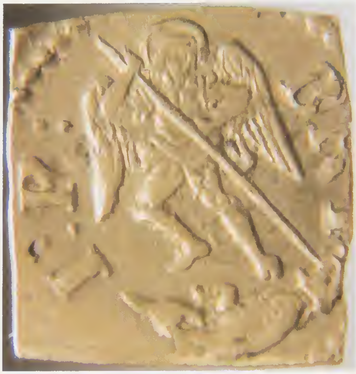
This mixed bag of gentlemen, labourers and craftsmen who disembarked in America 13 years before the Pilgrims landed at Plymouth Rock, had a hard time during their first three years. Of the first 500 no less than 440 were dead by 1610.[2] The principal cause seems to have been lack of food, as the Indians from whom they bought most of their supplies had none to spare.

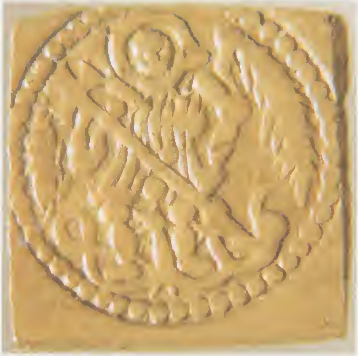
Dendrochronological evidence by scientists studying tree rings in Tidewater Virginia discovered that these "starving years" witnessed the most severe drought in 500 years. Based on newer findings, other reasons such as disease, murder and internal conflict are now also gaining acceptance. There were 35 gentlemen among the first 104 settlers, or one in three. Similarly, 28 of the next contingent of 106 were gentlemen.

The APVA website is full of further details of the history of Jamestowne and the reader is invited to learn more since on May 14, 2007 America will celebrate to the fullest the settlement of Jamestown which led to the founding of the United States of America.

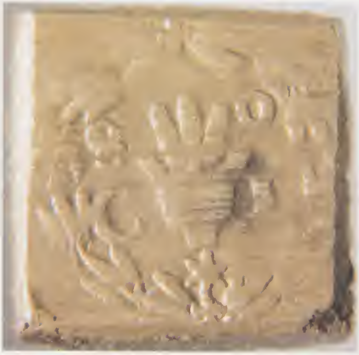
But enough of History, let us examine the ten coinweights found at Jamestown so far.

Weight J4. ➘➘ Angel 1619-25 [a].





Weight J5. ↗↗ Angel by Cornelis Janssen Antwerp [a].
Weight J5. ↗↗ Angel by Cornelis Janssen Antwerp [b].



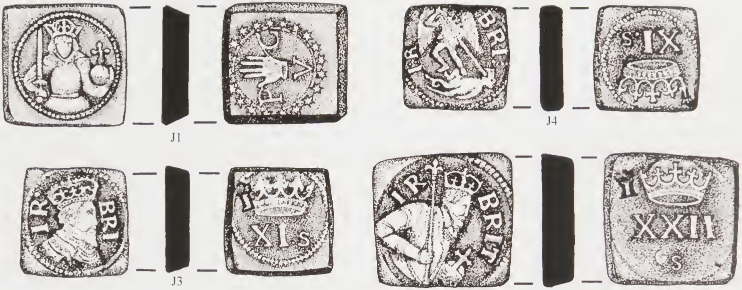


Figure 1. The first 4 coinweights found at Jamestown. Weights J1, J2, J3, and J4. Drawings compliments of APVA.

Weight J1 is for a ryal, not the one of England but the reaal (Dutch for ryal) of Emperor Charles V, made during the years 1521-1556. At issue it weighed 5.35grams, thus the reported mass of 5.4g confirms it is not for the English ryal (or rose noble as it was called on the continent).[3] The hand on the reverse is the mark of Antwerp. Since 1509, all weights made in the Low Countries had to show the city they were made in, such as the Flemish lion of Ghent or the hand of Antwerp. At first blush, the maker PVG might be Pieter van den Gheere, the son of Lenard van de Gheere III born 1588, but we only know of his work for certain when he was working in Amsterdam using a mark including the city of Amsterdam arms.[4] Moreover, Pieter is unlikely to be the maker of this weight since effective in 1576, all Antwerp weights had to be marked with a date, in addition to the hand and maker's initials.

Weights J2, J3 and J4 were found in the same location. Straube presumes they are from the same set. Although the weights are undated, they were made after the May 14, 1612 upwards revaluation by ten percent of all English gold coins. They could be used after 1619 when new coins were issued with the old values, but no square weights were allowed to be made in England after 1632. During the English civil war 1642-49 all manner of valuable coin would disappear from circulation "for the duration" as is universal in times of war.[5]

Weight J2 is for the Unite of James I, issued 1604-1619 with a mass of 10.03 grams. Value 22 shillings. All English-made coinweights are shown in the Withers catalogue[6] and this is numbered W486.[7]

Weight J3 is for the Half Unite or Double Crown of James I, issued 1604-1619 with a mass of 5.02 grams. Value 11 shillings. Probably Withers 506. Perhaps the name Unite was chosen by the king himself. He was very curious about his mint in the Tower, visiting it often. The name of these gold coins of 1604 is derived from their inscription FACIAM EOS IN GENTEM UNAM, part of Ezekiel 33-22 "I will make them one nation..." and he styled himself King of Great Britain, France and Ireland by proclamation of October 20, 1604, to be used upon his coins.[8]

Weight J4 shows the Archangel Saint Michael slaying the dragon, a symbol of Evil. Like the foregoing weights, it shows the initials I R and either BRI or BRIT for Iacobus Rex Britanniae, [James King of Great Britain]. (On weights with more room there is also MA standing for MAGNAE as in Great.) The reverses of the three coinweights in this group show a crown above the value in shillings. This Angel was worth 11 shillings since 1612. Legal mass at issue was 5.18 grams. W407 to 417.

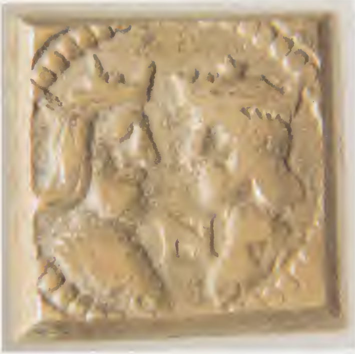
These four weights don't show much wear except degradation from being in the ground for nearly 400 years; they could not have been brought by the first group of settlers in 1607. They came with a later group in or after 1612. The Diggers say all opinions are tentative since the excavations are a work-in-progress that will not end in 2007 because of the planned 400th anniversary festivities.

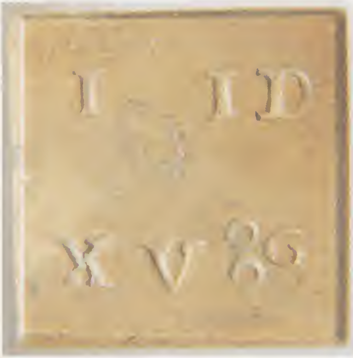
In her emails in August 2001, Straube told me they had found seven coinweights to date. Since no photographic images save two have been published to date, readers will have to rely on descriptions. Indeed, since APVA told me the coinweights are "unpublished", no copyright was granted for pictures for this article except for one image; therefore, all images are of my own weights. These may of course differ from those APVA will eventually publish.

Weight J5 is another one for the English Angel, but with an image typical for an Antwerp maker. It shows the hand of Antwerp on the reverse, but no year of manufacture. This means it was made from about 1540 to before 1576 when dates on weights became mandatory. Straube says the hand is flanked by the letters A-V.[9]

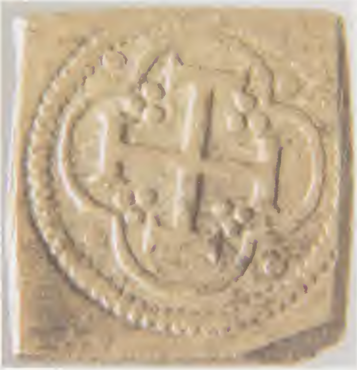
Weight J6 is for the gold Ducat or Excelente of Ferdinand and Isabella, their Catholic Majesties, as they were known. This coin was authorized in 1497, but some cities in the Northern Netherlands made imitations in 1581-1594 without a date. Obviously, as a republic-in-being The United Netherlands Provinces needed to show a "head" on their coins, to ensure their acceptance. These imitations had the same mass and image of the Spanish king and queen facing each other. Some coinweights even show the dot between the eyes of their majesties, the same as on the coin, a curious mark that so far no numismatist has been able to explain to me satisfactorily. The weight was made in France as evidenced by the reverse inscription of the mass indication II D XVoo G. Two deniers and 17 grains would be 3.45 grams.[10] This is the so-called tolerance mass at which a coin would be acceptable without penalty for missing metal. The legal mass of the coin at issue was 3.52 grams

Weight J7 is for the 2 Escudos of Spain with the cross of Jerusalem. Straube refers to the weight as one of Philip II (1556-1598), but it could also have been made under Philip III (1598-1621). Escudo weights actually do not show a king. Straube's description is *cross potent surrounded by a tressure of ten arcs, the juncture of each terminating in a fleur de lis. The reverse bears the initials C-I flanking the Antwerp hand with a star below, as well as the date 9-1 flanking the hand.* It would have been made by Cornelis Janssen in 1591. His working dates are 1564 when he became a citizen of Antwerp until 1604.[11] The 2 Escudo coin was the forerunner of the 8 Escudo

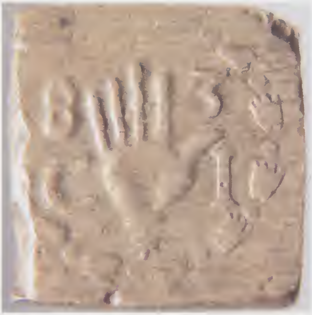




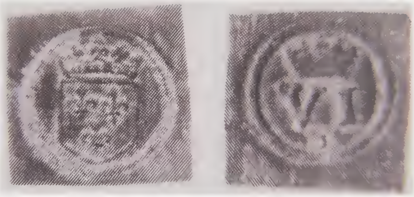
Weight J6. ↗ ↗ Excelente French-made [a].
Weight J6. ↙ ↙ Excelente French-made [b].



Weight J7. ➤➤ Two Escudo Cornelis Janssen Antwerp [a].



Weight J7. ↑↑ Two Escudo Cornelis Janssen Antwerp [b]. This weight is identical to the one in the Jamestowne collection except that it has an 83 rather than the 91 in the collection.



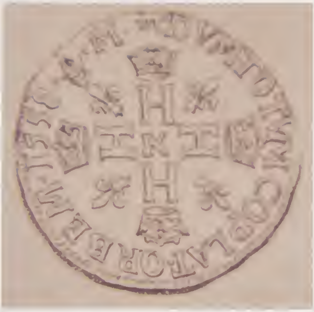
Weight J8. ↑↑ Withers 362.

gold coins minted since 1610, better known as doubloons, and really well known to the freebooters holding up the Spanish gold and silver fleets. The 2 Escudo legal mass issued since 1566 was 6.87 grams.

Three more coinweight finds were first shown on the internet in The Dig reports of July 22 and September 22, 2005.[12] Two are English-made and one is made in France.

Weight J8. This is for the gold Ecu, known in England as a French Crown. Withers shows three similar weights (W361-363) with the crowned French arms consisting of a shield displaying three lis inside. The reverse shows as value a crowned VI over S standing for six shillings, just as in the picture on their website. French crowns other than the Crowns of the Sun (ecu au soleil) as well as Crowns named "burgundians and kaisars" were allowed in England for 6 shillings under Elizabeth's proclamation of the year 1560.[13] In 1540 Emperor ("Kaiser") Charles V had issued a Burgundian coin in imitation of the French crown, locally called a Brabant or Flanders crown. The mass of this coinweight would have been about 3.40 grams and the coins would be worth 6 shillings until revalued in 1604.

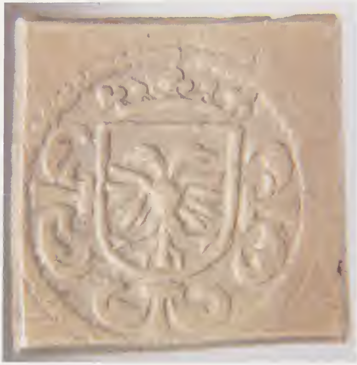
Weight J9 [not pictured] is not a coinweight, but rather a bullion weight for 2 pennyweights (dwt). This weight shows the crowned I verification mark of James's weights above the Roman numerals I I. Its mass should be 3.11grams. Withers does not show this particular weight but one for 5 dwt with crowned I of the same style and size 15-16 mm. W1025. For a weight to be called a coinweight, it must relate to a specific coin whose name is inscribed or pictured by an icon on the weight and have a mass exactly equal to the tolerance weight prescribed and published by the authorities. Bullion weights such as this would be used together with others to weigh coins in bulk.



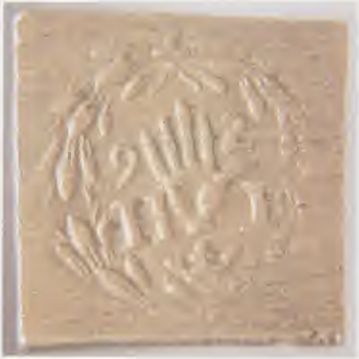
Weight J10. ↑↑ Double Henri d'or.

Weight J10. On the website this is called a coinweight[14] for a French Ecu from the reign of Henri II (1547-59). I would describe it as a fairly thick weight with an obverse featuring four crowned capital letters H forming a cross with 4 lis, one in each quadrant. The first French silver coins called Ecus were dated 1643 under Louis XIV. This then is a rather different coin, a gold Double Henri d'or struck by King Henri II in the years 1550-1558 weighing 7.31 grams. (Duplessy 974; Friedberg 370 (118)). The reverse of this made-in-France weight bears the stamped-in letters O V X, the letter O resting somewhat lower than the other two. This is rather problematic as two of my theories do not give a satisfactory result. Read from left to right, O V X makes no sense as Roman numerals are not written in that order. Likewise, if the letters were read from right to left as 16 deniers, the result would be an impossible 20.40g. I would have expected the reverse inscription V XVoo for 5 deniers 17 grains (7.28 grams). This coinweight is special inasmuch as the Double Henri d'or is rarely encountered in coinweight boxes and the coin in very fine grade is now worth about 5500 US dollars. I think there was little chance that this coin or the weight would be used, either trading with the Indians (wampum!) or the enemy Spaniards.

Other Virginia finds of coinweights have been made at Flowerdew Hundred [15] and Governor's Land[16], both situated upriver on the James River, the former 45 miles, the latter just minutes, from Williamsburg. On May 20, 2002 I visited Flowerdew Hundred, on the south bank, 45 miles south-east of Richmond. One of the earliest and most important plantations, it was granted to Sir George Yeardley who had already acquired the land before he became governor of the Jamestowne Colony in 1619. The Indian Massacre of 1622 devastated most of the plantations but Flowerdew was well defended. While other plantations were abandoned as a result of this massacre, Flowerdew continued in existence, it was well fortified, a "safe plantation".

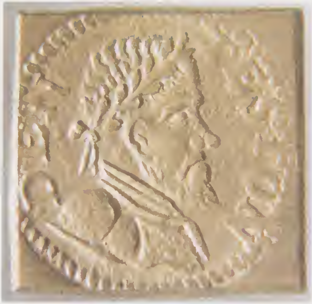


Weight F1. ▲▲ Half Reaal Hans Foncq Antwerp [a]..
Weight F1. ▼▼ Half Reaal Hans Foncq Antwerp [b]..

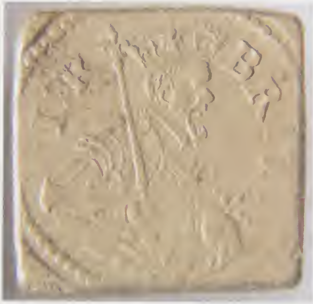


At Flowerdew Hundred where extensive archeological excavations have unearthed some 200,000 objects, three coinweights were of interest to me. Again, I was surprised to learn that such weights would have been found there, but it is clear to me now since English gentlemen and workers would settle here to stay and therefore, they brought all their important belongings with them. The fact that Flowerdew was well defended leads to the conclusion that soldiers who had fought with the Dutch during their 80-Years War with Spain had also brought their Antwerp coinweights with them, obviously believing that they could be needed there.

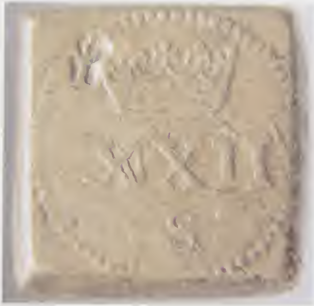
Weight F1 is described as being 15 x 15 millimetres in dimension, brass, with an obverse showing a crowned shield with the double eagle of the Empire inside a flowery circle, and the inscription H REIEL [not in picture] dividing the circle in 4 places. Its mass is 3.35 grams. On its reverse we find a hand, the city mark of Antwerp, and the numerals 8-0 [picture shows 9-2] as well as the letters H-F flanking the hand. This is a coinweight for the Half Reaal of the Emperor Charles V, a gold coin of the Burgundian Netherlands issued in the years 1521-1556. The maker is Hans Foncq 1577-1603. It is the best preserved of their weights and may be seen on the Flowerdew website[17]. In a coinweight box of Hans van Breda in Hamburg 1587-89, the label shows that this coin was also known as a Golden Printze Daler, a name that refers to the silver coin called Prinsendaalder minted 1583-1601; it shows the half-length cuirassed portrait of Dutch prince William the Silent holding a sword[18] At the time the two coins, gold and silver, had the same value, hence the alternative name.



Weight F2. ↗ ↗ Testoon Jan Caen Amsterdam [a].



Weight F3 & J2. ↗ ↗ One Unite Withers 486 [a].
Weight F3 & J2. ↗ ↗ One Unite Withers 486 [b].



Weight F2 is 15 x 16 millimetres and is for the silver Testoon, a French coin first issued by King Louis XII in 1514; it would continue to be issued by later kings until 1577. Like F1 it was found in the fortified compound. The obverse shows the half-length portrait of a bearded, laurelled king, Henri II (1547-1559) facing right. The inscription around, in Dutch, is DEN TESTON, the testoon. Hans Foncq is also the maker of this. The mass of this weight is around 9.3 grams [19]

Weight F3 is the largest of them. It shows a ¾ portrait of the crowned King James I facing to right with sceptre and orb. It weighs the gold Unite of 22 shillings, the value to which it had been revalued in 1612 when all gold coin values were raised by ten percent, as it had been found that English gold was undervalued in relation to silver and that it was fast disappearing from the country. The coin itself was issued in 1604 but coinweights for the original 20 Shilling gold coins were never made. The reverse shows a crown over XXII over S to indicate the value. Its mass would be 10.03 grams at issue. Its finding place, called Pistol Barrel Site indicates that this coinweight was once the property of a gentleman or a fighter in the Dutch War of Independence 1568-1648. See also Weight J2.

At Governor's Land they found two coinweights by the seemingly prolific Hans Foncq of Antwerp. Both are dated 1597. One is for an Angel, see above, the other for a Portuguese coin called a Milreis. It shows on its obverse the arms of Portugal; the coin dates from 1555-78 and is referred to under its official names as a Cruzado or a St. Vincent. Outlaw does not give a mass for these weights, thus we are left to speculate whether they were for the full Angel of 5.18 grams or its half, and the 2 Cruzado with a legal mass of 7.65 grams at issue or its half. Governor's Land was one of seven plantations represented in the first Virginia Assembly of 1619; these 3000 acres were originally set aside for the governor of Virginia. In 1624 the charter of the Virginia Company was revoked, primarily it seems, as a result of the alarmingly great number of deaths, many obviously as a result of poor stewardship of the land and the Indian Massacre of 1622. It could also explain the small number of coinweights found on Governor's Land.

In conclusion, this then is the first comprehensive account of the first English, Dutch and French coinweights found in Virginia, English America. Jamestown would remain the first capital of the Colony of Virginia until after the fire of 1698 that destroyed the State House. No doubt, there were similar developments in Spanish America. A coinweight in my collection for three Castellanos dating from the end of the 15th century was found among Pieces of Eight in today's Peru, but how it got there is anybody's guess. It would be another 100 years before the Americans first made their own coinweights. They did so in 1709 in Philadelphia, but that's another story. [20]

Notes:

(1) Press release of APVA. Fact Sheet www.apva.org

(1a) The letters following the Withers numbers and elsewhere indicate [a] = obverse and [b] = reverse of the coinweights.

(2) PBS premiere showing of Death at Jamestown on WNED Buffalo/Toronto on October 18, 2006.

(3) Friendly emails from senior curator Bly Straube in August 2001.

(4) Wittop Koning and Houben fig. 331 and 430.

(5) Superb drawings by Jamestown's Jamie E. May of these four are shown on p. 51 in APVA's booklet III about the Jamestown Rediscovery. Shown here courtesy APVA.

(6) Withers on British Coinweights, passim.

(7) This weight for a Unite shown on the APVA website since 2001 was recently still incorrectly identified as an 11 shilling Double Crown or Half Unite.

(8) Ruding Vol. I, p. 361.

(9) This may be a misreading; a maker with these initials is not known. The seemingly busiest of the Antwerp makers with a matching first name was A. Janssen whose initials A-I often graced the obverse instead of the reverse. Another of his contemporaries in the 16th century was A-C, Andries Caers 1579-1620, although those weights should show a date which by then was mandatory. Weights marked A-I are seemingly the only ones fitting here.

(10) Sometimes, an 8 is used to indicate the lowercase letter g, as it looks almost the same as the g in grains. Reverse inscriptions of tolerance mass did not appear on French weights until the 16th century. Makers' marks would come later.

(11) It was a prerequisite to exercise a trade or profession in a city that one first acquired the rights and responsibilities of a burgher (Dutch poorter). A weight with this reverse is shown as fig. 443 in Wittop Koning and Houben, op. cit.

(12) See http://www.historicjamestowne.org/the_dig

(13) Ruding Vol. I, p. 333.

(14) Coinweights for silver coins are rare. I expected some would be found because silver coins were more numerous. The scarcity of silver coinweights generally can be explained by the fact that a gold:silver ratio of, say, 16:1 meant that missing metal on a silver coin was only 1/16ths as expensive as missing mass on a gold coin. Gold and silver coins were heavily clipped by the time they reached Ireland (treated like a colony), America and the West Indies. That was a fact of life.

(15) The term hundred is found in a common law division of an English shire, originally introduced by the Saxons between 613 and 1017 AD. It was meant to be a size of land that would feed one hundred families. During my visit at Flowerdew Hundred, curator Karen Shriver kindly allowed me to take away several data sheets. These data have been used here.

(16) Governor's Land applies to a tract of land granted to the Virginia governor. Archaeological excavations carried out in the 1970s found coinweights, however, no further information is available at this time as it has become an exclusive planned community. But see Outlaw, A.C.

(17) www.flowerdew.org All images shown in this article are from the author's collection as I was offered copyrighted images only if I would agree to the Flowerdew Foundation's restrictions for my article about them All three weights had been seen in March 2002 by Barry Cook of the British Museum, Curator of Late Medieval and Modern Coinage, who believes the first two weights are from a set. He thought the silver weight, F3, showed King Philip II as Duke of Milan, but the weight's condition is such that he could not see that the king wore a laurel wreath. The Spaniard never wore laurel around his head. On his silver coins, Henri II is rarely without.

(18) Delmonte 919-928a.Official name Gehelmde Rijksdaalder. The label may be found in Kisch, fig.88.

(19) The French testoons of Henri II weighed 9.60 grams at issue in 1549, Duplessy 981.

(20) Please see "Jan Coppenol, Emigrant to America, The First Dutch Coinweight Box that Travelled the Farthest", in *Equilibrium*, Issue 1, 2007.

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Jan Van Coppenol, Emigrant to America:

The First Dutch Coinweight Box that Travelled the Farthest

BY GARY BATZ

When Cornelius Tyson brought this coinweight box with him to Pennsylvania, it was already nearly 60 years old. On the inside of the lid is the handwritten entry:

Jan van Coppenol maect dese/Goutgewichten/Tot Haerlem 1625.

It passed from generation to generation through the Tyson family until it was sold by I. Markley Tyson to Pennsylvania Governor Samuel W. Pennypacker in 1912.

Historical Background

The Commonwealth of Pennsylvania dates from a land grant of King Charles II to William Penn in 1680. William Penn Senior (1621-1670) was a British admiral to whom the king was indebted and in lieu of money he gave his son Pennsylvania which had been named after his father, Penn's Woods. The younger William Penn, born 1640, was a Quaker who had made missionary journeys to Holland and Germany to assist the Quakers as he had done in England and Ireland.

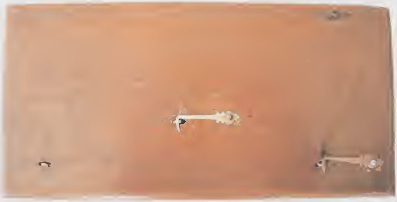


Fig. 1. Jan Willemsz van Coppenol box of 1625, one of three surviving by this Haarlem master circa 1620. The other two are in museums, Frans Hals at Haarlem and Geld-en Bankmuseum at Utrecht.

Religious dissent in England had brought William Penn to America. On the continent similar developments among the protestant religionists occurred resulting in their being "driven up and down the Rhine". The followers of Menno Simon had gathered members from among the Quakers and they became members of the Mennonite church at Krefeld and at Haarlem.

Fig. 2. Inside lid "Jan van Coppenol made these gold weights at Haerlem* 1625" (* Old style name of Haarlem).

In 1682 Penn sold 5000 acres each to two members of a group. The first thirteen families of Dutch and German descent, comprising 33 persons, arrived from Krefeld at Philadelphia on October 6, 1683. The land was divided up and they spent their first winter rather primitively in caves they dug along the Delaware River. They founded Germantown.

Tyson's brother Reiner or Reynier Tyson, born 1659, was one of those first arrivals[1]. Cornelius, born 1652 in Krefeld, Germany, followed him, probably in 1684. With his wife Margaret he had six children, all mentioned in his will and alive in 1716, when he made his testament and when he died: Matthias, Barbara, Aeltje, Williamtje, Jannicke and Peter.

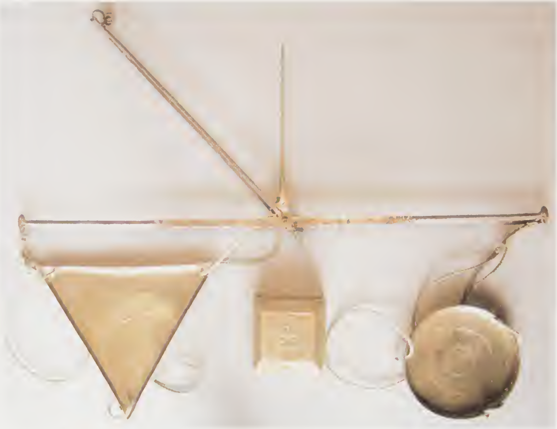


Fig. 3. The scale with typical trumpet ends made in Cologne. This type scale was made for less than 100 years, starting around 1580.

Finding Tyson

Cornelius Tyson died on May 9, 1716 and his will was probated in Philadelphia County on July 27, 1716. The widow was requested to bring in an inventory of the deceased's property. With the help of my friend, the late Eugene P. "Gene" Mahoney of Berkeley Springs, West Virginia, I obtained a copy of the will stored at the State Archives at Harrisburg, capital of Pennsylvania, but he could not locate a copy of the inventory. We had hoped it would mention the scale and weights box.

At the Germantown Historical Society on September 21, 1999, I studied many documents regarding Tyson and learned that he was a weaver and is buried in Ax's Cemetery also known as Upper Germantown Burying-Ground. The following morning I went to his grave, took photos of his burial site and gravestone and left a large pot of chrysanthemums there for the caretaker to dig in.

Tyson's grave marker is the oldest in Ax's Cemetery.

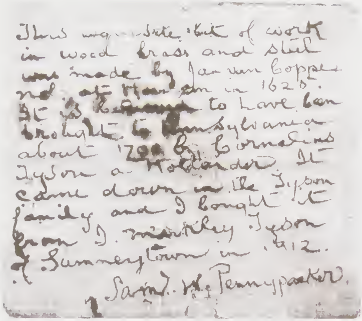
The inscription reads (in Old Dutch):	and in English:
OBIJT.MEIJ 9 1716	DIED MAY 9, 1716
CORNELIS TIESON	CORNELIS TIESON
OUT 63 JAER	63 YEARS OF AGE
SALIG SIJN DE DOON	BLESSED ARE THE DEAD
DIE IN DE HEERE STERVE	WHICH DIE IN THE LORD
THEILRIG IS HAER KROON	BLESSED IS THEIR CROWN
TGLORIRIC HAER ERVE	HEAVEN IS THEIR INHERITANCE

Fig. 4. Tyson's grave stone.

We have here a conflation of several sources:

Revelations 14.13: Blessed are the Dead which die in the Lord.

Perhaps our readers can supply the source of the remaining lines: Blessed is their crown, Heaven is their inheritance[2].



This exquisite bit of work
in wood brass and steel
was made by Jan van Coppe-
nol at Haarlem in 1625.
It is believed to have been
brought to Pennsylvania
about 1700 by Cornelius
Tyson a Hollander. It
came down in the Tyson
family and I bought it
from I. Markley Tyson
of Sumneytown in 1912.
Saml. W. Pennypacker.

Fig. 5. This undated note, penned before 1916, by Samuel W. Pannypaker concerning his purchase, in 1912, of the Van Coppenol coinweight box from I Markley Tyson, a relative of Cornelius Tyson who brought the scale and box with him to America. It reads as follows: *This exquisite bit of work in wood, brass and steel was made by Jan van Coppenol at Haarlem in 1625. It is believed to have been brought to Pennsylvania about 1700 by Cornelius Tyson, a Hollander. It came down in the Tyson family and I bought it from I. Markley Tyson of Sumneytown in 1912.*
Sam'l W. Pennypacker

Further information reads: *Cornelias Tyson came to this country in 1703, probably from Crefeld, a city on the lower Rhine, within a few miles of the Holland border. He settled in Germantown, where he was a weaver. His will was dated 6 April 1716, and probated 27 July 1716, in Phila. County*

Help with Research

Gene Mahoney enjoyed doing research and would not take a fee for his work. On two occasions I paid his expenses as this research took him away from his home and he had expenses for which I wanted to reimburse him. From Links Genealogy I bought a study of the collected data about the Tyson family and the families of the other first arrivals.

In the months preceding my visit to Germantown and Schwenksville, I did extensive research into the family of Cornelius Tyson at the University of Toronto Robarts Library, principally in copies of the magazine *The Pennsylvania Magazine of History and Biography* (PMHB). There I also found a great deal of further information about Governor Pennypacker and his life and times. I copied hundreds of pages of written material about both of them and their forebears.

Preserving Dutch History

Samuel Whitaker Pennypacker was born in 1843. His father was a professor of Jefferson College and his mother was the daughter of a wealthy ironmaster. Himself of Dutch extraction, (originally Pannebakker), he was an avid collector of everything Dutch. He was descended from more than one of the early immigrants; he mentions Tyson, Kuster, Conrad, Sellen, Umstat, and probably Rittenhouse in a paper he wrote in 1899 as Senior Vice-President of The Historical Society of Pennsylvania. He became a member at age 29 and he was its president from 1900 till his passing in 1916. As a 20-year-old he saw military service in the Civil War at the Battle of Gettysburg. In 1866 he was admitted to practise law in Philadelphia and he became a judge in 1889. In the years 1903-07 he was the Governor of the Commonwealth (State) of Pennsylvania, with offices at the state capital Harrisburg. His lifetime achievements and distinctions are too many to recite here; they fill 125 pages in the PMHB of 1917[3].

On September 22 I also went to his farm and home at Pennypacker Mills at Schwenksville, not far from Germantown (now part of Philadelphia) where President Judge Pennypacker, LLD lived both before and after his term as governor. At the Governor's Mansion I was well received by the curatorial staff; they were delighted I knew so much about Pennypacker. I had brought with me his handwritten note in which he confirms that he bought the scale and box from I. Markley Tyson of Sumneytown in 1912. One of the curators confirmed that it was in his handwriting. His son held an auction in 1920 through the Philadelphia auction firm Samuel T. Freeman & Co. At the Mansion I received the auctioneer's memorandum showing a "set [of] scales" had fetched the sum of $11.50. Fortunately, Pennypacker's 1912 note travelled with the box to its new owners; without it, this story would not be possible. It is rather weak now and has a few pinholes. It came to me inside a plastic sleeve mounted on a cardboard along with the typewritten further note. He calls Markley Tyson a Hollander, and rightly so. I had plans of finding descendants of I. Markley Tyson but I could not find the name in Sumneytown, which is not very far from Schwenksville[4,5].

The Governor's Mansion at Schwenksville is a museum operated by volunteers and owned by Montgomery

County. The Pennypacker Express, a bi-monthly newsletter keeps me in touch with all the educational events and history re-enactments at the Mansion.

How I Got Started With Philadelphia Silver Weights.

At a Florida coin show in January 1989 a couple from Philadelphia offered me a 17th century Cologne coinweight box. I checked the coinweights for completeness, bought and paid for it and was almost on my way when the gentleman handed me a grey linen bag, the size of a small fist, and said "These are the weights that go with it". I looked into the bag, probably shook my head in disbelief as there were 21 more weights, some much larger and different than the usual coinweights, and went away with my purchase, to visit other tables.

Our Research

I met Gene Mahoney in 1984 at my first ISASC convention in Chicago[6]. We hit it off well right from the start as we were both collecting coinweights. We renewed our friendship in 1986 and 1988 at the conventions in Washington and Boston. He already knew much about these strange weights. Soon I was examining a large coinweight box at the Henry Ford Museum and Greenfield Village at Dearborn, Michigan in August 1989. To my surprise, Henry Ford, who once said "All History is bunk!" had started to collect American artifacts through knowlegeable agents all over America. In 1937 an agent bought him a box with these weights from an antique dealer in Philadelphia. There were "those weights" again and a scale with 73 mm large pans intended to weigh silver coins rather than gold along with fifteen weights and some small adjustment weights that bore the rectangular stamp PS.

Gene had some of these weights with different maker's marks and had started to research into who the makers were. All the signs were pointing to Philadelphia as the source. That seemed well borne out by Henry Ford's purchase and my own. Gene found his at flea markets in the Philadelphia area. The Brass Book[7] classified one as early American metal work. He found two more at E .I. DuPont's Winterthur Museum and Gardens at Winterthur, Delaware[8]. On one of these weights PLUMLY was punched next to the GP mark. The other is stamped PS. This left no more doubt we had found one of the makers by name. Gene also knew of a man in New Jersey who owned a number of them stamped GP.

Gene and I exchanged notes about our findings and we became familiar with the names of many of the American silver smiths during my research in Toronto. This was so since both the Ford and the Winterthur had attributed their PS weights to the father-son team of Philip Syng, famous Philadelphia silversmiths. It seemed the weight makers were persons who had the skills and exact working habits to produce precision weights.

The Office of Sealer

Soon we established that these initials belonged not to silversmiths but to leading artisans in Philadelphia and persons appointed as sealer of weights in that city. The earliest, Thomas Pascall was appointed sealer in 1699. He marked his weights TP in a diamond[9]. He was a Councillor of the Pennsylvania Assembly, the governing body of the colony. George Plumly or Plumley was a pewterer. Appointed sealer in 1717, he marked his weights with GP in a heart. In 1741 Isaac Taylor with initials IT in a heart was appointed sealer for Chester County which adjoins Philadelphia,

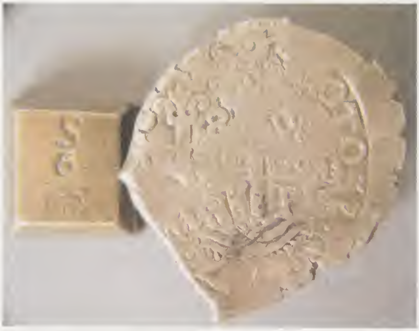


Fig. 6. Six Shillings in Pennsylvania equal 1 Spanish dollar (called a Pillars and Waves dollar made 1687 in Potosi, Bolivia, formerly in the viceroyalty of Peru, probably by minter VR Pedro de Villar).

immediately to the west. One of the weights was marked DS for Daniel Syng (1713-1745), probably a relative of Philip Syng, the silversmiths. Other weights are marked WT in a shield. Our tentative identification is William Till.

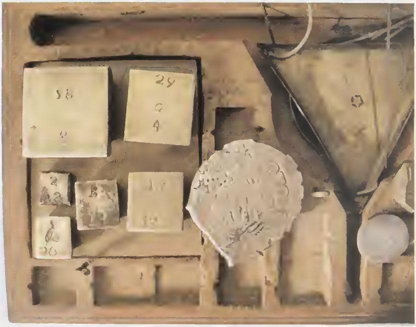


Fig. 7. Reverses of the shillingsworth coinweights.

Finding PS and GP

The breakthrough came in 1991 when Gene discovered the Statutes at Large of Pennsylvania, Chapter CLXVI, Section II, passed April 30, 1709. ... *there shall be sets of weights of all sorts necessary, exactly proportioned ... from one halfpenny worth of silver to any sum that shall be thought fit, which weights shall be prepared and sold by Peter Stretch and George Plumly of Philadelphia, who shall stamp their respective marks thereon and be accountable for their exactness; and for seven such weights between one halfpenny in value and sixpence inclusive, they shall receive two pence for each weight; and for seven convenient weights between eight pence and twenty shillings inclusive, they shall receive four shillings and one penny, or five shillings and three pence for all the said fourteen weights and no more.* Since Gene and I owned most of them we called them Philadelphia silver weights. These are doubtless the weights for all these sets. Our weights were strangers no longer.

Peter Stretch, born 1670, was a clockmaker in Philadelphia who arrived there in 1702 at age 32. He was also a brazier who could make his own clock parts from brass, thus he had the skill and accuracy required. An invoice exists from 1733, showing he sold William Penn, the “Proprietor of Pennsylvania”, a box of scales and weights for gold & silver for 15 shillings. In 1753 he made the State House clock (at the then seat of government) and in 1759, was paid 494 pounds and 5 shillings for making it and taking care of it for six years. His shop was on Second Street.

George Plumly or Plumley, born 1680, was the 7th and youngest son of Charles Plumley, a joiner, and his wife Margery. His parents were members of the Society of Friends (Quakers), religionists who were no longer welcome in England. George is variously referred to as a pewterer, a merchant, and in his will of 1734 he calls himself a cutler. He was appointed sealer in 1717. As cutler he made and repaired sickles which he advertised for sale in the Pennsylvania Gazette. We found his advertisements of 1738. For decades he was a vestryman in Christ Church. Gene located his will of 1734, the codicil he made in 1754 before he died and the inventory of his estate made in the same year. He died a man of above average wealth leaving silver “plate” in the amount of 48 pounds 16 shillings and six pence. In those days, without banks, wealth was stored in silver utensils, such as a “great Tankard”, porringers, salvers, salts, milk pots and spoons. In his shop on Third Street were nearly 106 dozen sickles with a value of more than 56 pounds, along with all manner of tools and materials for their manufacture. His estate altogether was worth 14 shillings short of 300 pounds. It included a *Negro Man York and a Negro woman Ruth worth 40 and 35 pounds, respectively, One Negro Man Named Looce Old and Lame and must be maintained, brass weights at 12 pence/dozen, and a box with scales and weights* valued 15 shillings, the same value as in Peter Stretch’s invoice to William Penn.

The fourteen weights envisaged in the law were the following, however, so as not to confuse the value of the weights expressed in pence with pennyweights, the unit of mass, I decided to call them shillingsworth weights

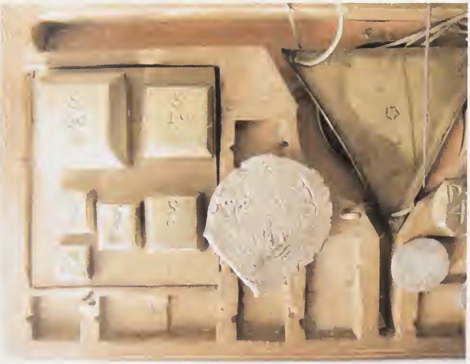


Fig. 8. Obverses of the shillingsworth coinweights.

and penceworth weights: The 14 weights mentioned in the law are: 20 shillingsworth (abbreviated s), 10s, 6s, 3s, 2s, 1s and 8 penceworth (abbr. p), 6, 5, 4, 3, 2, 1 and $^{1}/_{2}$ penceworth. Six shillings was the value of the Spanish dollar. There is no weight for 5 shillingsworth, since the Piece of Eight Spanish dollar was divided into halves (being 3 s), quarters (being 1 shilling sixpence) and eighth (being 9 pence).

The shape of the weights is unique and has been used nowhere else. I refer to them as truncated step-pyramids: Their underside is larger than the upperside. Before they reach the top level they slope upwards at two different angles.

George Plumly Advertiser

Besides advertising his sickles, he let Philadelphia know about his weights. Gene's Plumly box with 13 weights has a paper label glued into the inside of the lid: Advertisement. *The Original Standard of Penny=Weights and Grains are kept by George Plumly in the Third Street, Philadelphia; who is authorized by Law, to make and seal Weights to weigh Silver and Gold, &c. Where you may be supply'd with most Sorts of Scales and Weights at reasonable Rates. There follows "A Table of the Weight of Gold" with 24 predetermined values of the metal from 1 grain to 24 ounces troy.*

George and Thomas on the Same Weight

Gene found a weight at a Baltimore Museum collection which bears, on opposite sides, the initials TP and GP. This shows that on being appointed sealer in 1717, George re-verified Pascall's weight. Gene's box contained one weight with the TP symbol alone.

Adding to My Collection

Gene found more weights at Adamstown, the location of the best antiquing finds, North-West of Philadelphia. The dealers could not contribute any knowledge about them; to them they were just merchandise to get the best price for. By the summer of 1998, we had both done further research so that when the Van Coppenol box contents were described, I knew what we were dealing with. To the collectors in Holland they meant nothing. Those weights would have been taken from the box and sold cheaply elsewhere. However, I knew of this plan and decided that I wanted the box intact. My offer was made high enough to win.

When Gene died unexpectedly in May 2001, I could buy from his estate all his Philadelphia silver weights and his coinweight boxes used in America. Boxes used in America's early colonial history were a welcome field of research, welcome as no one else was "crowding" it. This was a challenge I gladly wanted to continue to invest time and money in. A. George Mallis, the American coin researcher and fellow-member of ISASC had a WT piece, but on my second visit to him - weeks before his sudden death in December 1999 - he told me he had promised to bequeath it to another well-known American numismatist. Another coinweight box was offered at the same coin show in Florida, the day I received my first weights. I made notes of them, but before I could decide to spend $ 1600 on a colonial period box containing but three of them, an Ohio collector had made the purchase. The makers were PS, IT and DS whom we tentatively identified as Daniel Syng, a relative to the Philip Syng silversmiths.

Why Were These Weights Made?

In the 1700s the American trading system was mostly based on barter. Hard currency was hard to come by. There was no mint in America after 1682, when Massachusetts was obliged to stop minting coins. Many immigrants had brought with them limited amounts of gold and silver coins of their home countries. Gold and silver coins were scarce but they were current at predetermined prices published in periodical gazettes and annual almanacs, by groups of merchants who stated how much they would give in payment.

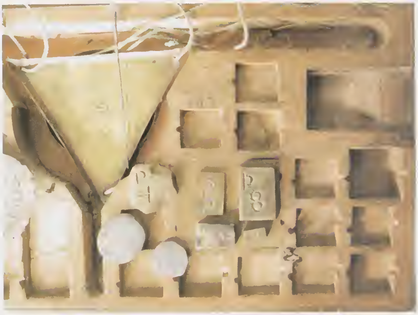


Fig. 9. Obverses of the penceworth coinweights (reverses are blank). Also note Van Coppenol's 5-pointed star maker's mark and upper part of the boxmaker's mark (all except one Dutch boxmaker are unknown). This is one of the first boxes made in Amsterdam, taking their cue from Cologne.

In Philadelphia, at that time, the Spanish Piece of Eight or Spanish dollar, as it was called, weighed 420 grains or 17 pennyweights 12 grains and it was valued at 6 shillings; however, in London its value was only 4 shillings 6 pence Sterling, written 4/6. In America nominal values were 33% above values in England. While in England the shilling held 92.75 grains of .925 ("sterling") silver since 1601, the colonists had made shillings of about 70 grains since 1652, using what was called coin silver[10]. Seventy-five percent of 92.75 grains is roughly 70 grains. Both the English and the American measures had the object of keeping colonial money out of Britain and the home-made coins within the colonies[11].

Queen Anne's Proclamation

The 1: 1.33 relationship became officially recognized by Queen Anne's Proclamation of June 18, 1704. When word reached "our several colonies and Plantations in America", as early as February 13, 1705, Lieutenant Governor Evans of Pennsylvania let it be known to the Council of Trade and Plantations in London (who were responsible for trade in and with the colonies) that his province would refuse the Proclamation on account of the fact that each colony had a set standard of currency that differed from the others. But this difference was the reason London wanted to force a single standard on all colonies. Doubts arose in England about the legal effect of governing by proclamation; thus it became enshrined in law in March 1708. Adherence seemed to be another matter. Accounting in America had traditionally been in pounds, shilling and pence, as money of account, but settlement would be in what then became known as Proclamation money or lawful money, in whatever currency was at hand or stipulated by the parties in written agreements.

Silver was different. Queen Anne's proclamation and law dealt with gold but not with the value of silver coins. Since there was an established gold: silver ratio, gold coins could therefore be valued in terms of silver by weight.

The Spanish silver Dollar or Piece of Eight had been minted in the Spanish colonies in America since the mid-1500s. It had become the transaction money. Although the proclamation was intended for all her colonies equally, American trade had grouped itself along different lines. There were interest groups whose central points were the major ports of entry, Boston, New York, Philadelphia and Charleston. Each group valued their money differently, so that if you rode from Philadelphia to New York, the guinea in your pocket worth 1 pound 14 shillings would gain 2 shillings as you crossed into the New York sphere of commercial interests. But that was only an illusory gain as all money there was valued higher, and with higher prices.

The Table Showing the Van Coppenol Philadelphia Silver Weights

This brings us back to our Philadelphia silver weights in the Van Coppenol box. In those days coins, as we know, did not pass by count but by their intrinsic value which had to be determined by weighing. With the Spanish Dollar at 6 shillings this gives the following table, one which reflects the silver weights here in the box.

Coppenol Box Weights Made by George Plumly, Stamped GP in Heart

Large Side: Pennyweights: Grains	Large Side: Equivalent in Grains	Small Side: Shillings/Pence (Money of Account)	Spanish Dollar Value
58:8	1400	20/0	$3^{1}/_{3}$
29:4	700	10/0	$1^{2}/_{3}$
17:12	420	6/0	1
8:18	210	3/0	$^{1}/_{2}$
5:20	140	2/0	$^{1}/_{3}$
2:22	70	1/0	$^{1}/_{6}$
8:0	192	2/9	c.$^{1}/_{2}$
4:0	96	$1/4^{1}/_{2}$	c. $^{1}/_{4}$
2:0	48	$0/8^{1}/_{4}$	c. $^{1}/_{8}$
1:0	24	0/4	c. $^{1}/_{16}$
Large Lead	105*	1/6	$^{1}/_{4}$
Small Lead	$52^{1}/_{2}$*	0/9	$^{1}/_{8}$
*Mass probably intended	All wts are within 1% of indicated mass	24 grains are 1 pennyweight or 1.555 grams.	1 grain weighs 64.8 milligrams

Why Two Measures Given on Each Weight?

The question arises why the weights show both mass (pennyweights and grains) and value (shillingsworth and penceworth). If inflation changed values upward, would not these weights be useless within a short time? The one steady feature of that time was the concept of Proclamation Money or Lawful Money, the latter often abbreviated L.M. in documents. These terms continued to have relevance in America for a long time as is shown in "A Table of the Weight and Value of Coins as they pass in New England" in Freebetter's New England ALMANACK for the year 1776. The dollar is still shown as 4/6 Sterling (i.e. London) and 6 shillings L.M. By that year inflation had advanced 650% over lawful money and the dollar was quoted at 45 shillings.

Thus, since the "advance over Legal Money" was public knowledge, one could use the weights for all calculations. Money was still being weighed well until the middle of the 19th century, therefore the mass side of the weights continued to be useful. Shillings and pence were still used as money of account in accounting records in the first quarter of the 19th century by a number of commercial enterprises. Settlement in foreign currency was, for lack of American coins, made in foreign currency which remained legal tender until finally abolished in 1858.

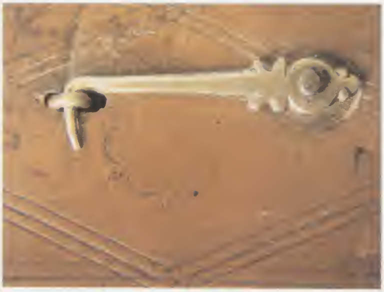


Fig. 10. Centre closing hook on top of the box.

What Happened to the Weights Van Coppenol Made?

There is no doubt the Van Coppenol box was full of his coinweights when Cornelius Tyson arrived with it in 1684. The inscriptions above the recesses are still legible but it takes experience to decipher them; many are abbreviated for lack of space: Gou leeuw, ½ Gou leeuw v Vlandr, Goutgulden, E Hertogen, Crusaat, Grote Crusaat, Sitter, Statecroon and Zon Croon. They all represent coins that were current in 1625 in The United Netherlands Provinces. The lion of Flanders and its half, the German Goldgulden, the Souverein of the Arch-Dukes Albert and Isabella, the Cruzado of Portugal and its 10-ducat Portugaleser, the half Sovereign of Henry VIII, the Dutch Statenkroon and the French Zonnekroon. The rest of the 38 names are illegible or missing since the space for 17 weights was cut away to use it for the Philadelphia silver weights. The box is filled again, but I am still missing a few Van Coppenols. Fortunately, the most valuable scale with its Cologne "trumpet" beam ends is still in the box. The triangular pan has Van Coppenol's 5-pointed star which he also used on all his coinweights.

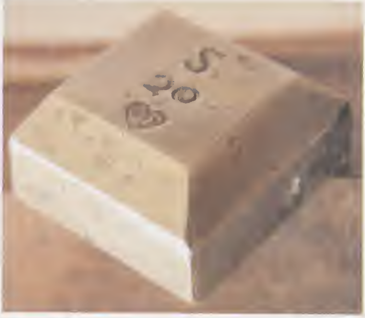


Fig. 11. The unique, "truncated step-pyramid" shape of the shillingsworth weights. There are two distinctly different angles before the weight reaches the upper platform.

What happened to the original weights? In the New World everything was "recycled" that could not be obtained locally. Brass is fairly indestructible and does not decay as do iron and steel in the ground. So it is very likely that the original Van Coppenol weights are living a second life as Philadelphia silver weights.

Epilogue

I owe a great debt of gratitude to three of our members, of ISASC and GMVV or either of these societies, who recognized its historic significance from the day the coinweight box was bought in a house clearing in Maryland to the day, after two further Atlantic trips, it came to its present place in Canada. They wish to remain unnamed.

Notes:

1. The family name is rendered in many versions as there were no spelling rules but many ways of Anglicising foreign names. Some are Thyson, Tisen, Tiesen, Tissen, Tysen. Today the family name is Tyson. Tyson is a household name in America: Tyson Foods Inc. is the world's largest processor of chicken, beef and pork.

2. I am indebted to my friends Ronny and Jaap Visser for their help translating the inscription.

3. OMHB Volume XLI (1917) No. 1.

4. A 1725 petition by the Dutch inhabitants bears a.o. the signatures of Jacob Merckley, George Merckle, Matthias Teissen and Henry Pannebecker. This shows the relationships of the Markleys and the Tysons.

5. Germantown, now part of Philadelphia, lies about 9 km from the centre of Philadelphia. Schwenksville and Sumneytown are north of there, about 45 and 50 km respectively.

6. International Society of Antique Scale Collectors, founded in 1976, a sister society to GMVV.

7. Schiffer, Peter, Nancy and Herbert, The Brass Book, Exton, PA 1971.

8. Accession No. 58.1592

9. In England and America the office of sealer is an official appointment of the person overseeing the exactness of weights and measures.

10. I still wonder what hides behind the expression "coin silver", since presumably silver coins of different finenesses were melted in the same pot.

11. The French had the same 1: 1.33 ratio for their colonies in America.

Literature consulted:

1. Houben, G. M. M., "Jan Willemsz van Coppenol" in: Meten en Wegen, December 1996

2. *The Pennsylvania Magazine of History and Biography* (PMHB), a monthly magazine, still being published, passim.

3. *The Pennypacker Express*, The Official Newsletter of Historic Pennypacker Mills, a bi-monthly magazine, still being published by Montgomery County, Pennsylvania, passim.

4. *Krefeld Immigrants and Their Descendants*, Links Genealogy Publications, Sacramento, California, n.d.

5. Keyser, Peter D., *History of the Upper Germantown Burying-Ground*, in: PMHB Vol. 8 (1884).
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7. Pennypacker, Samuel W., *The Settlement of Germantown in Pennsylvania*, in: PMHB Vol 23 (1899).
8. Jordan, John W., *Colonial Families of Philadelphia*, New York and Chicago 1911.
9. Tyson, Samuel T., ed., *A Contribution to the History and Genealogy of the Tyson and Fitzwater Families*, Los Angeles 1922.
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11. Futhey, J. Smith and Cope, Gilbert, *History of Chester County, Pennsylvania*, Philadelphia 1881.

Dedication:

This essay is dedicated to Eugene P. "Gene" Mahoney, 1925-2001, consummate researcher into the neglected history of United States weights and measures.

Author's Biography:

Gary has researched Colonial American and early Dutch coin scales and weights. This is the first article about this fascinating subject with the help of the late ISASC member Eugene "Gene" Mahoney. Also he has been teaching coinweights to young detectorists on the Belgian/Dutch forum www.muntstukken.be

Review

The Handbook Of Old Weighing Instruments by Michael A Crawforth. Michael began compiling the 'Handbook' some 25 years ago; it soon grew to 130 pages crammed full of information for dating, naming and classifying scales and weights. Written in a clear, matter-of-fact, style with facts carefully marshalled into an orderly and logical sequence, the 'Handbook' became a 'must have' for ISASC members.

Revised in 1998 there are 25 sections including 9 classifying scales according to their principle of operation, with a thorough descriptive and illustrated paragraph for each type. There are 143 drawings, in total, highlighting key features of the instruments described.

Three sections dealing with 'Weights', 'Weights found in Coin and Apothecary Boxes' and 'Weight Conversion Factors' can only be a brief taster on this extensive topic. However, with 18 illustrated types of weight and a descriptive list of 180 weights arranged in weight order, together with a page devoted to 'Useful Conversion Factors' and 'Apothecary Symbols' I am sure these pages will have been and will continue to be, well thumbed by collectors.

Equally valuable are pages dealing with: -

- 'Glossary of Terms' – 309 terms, not in every day use, explained and illustrated.
- 'Dictionary' – 572 unconventional words in English, German, French and Dutch
- 'Patent and Design Registrations' for Britain, USA and Germany
- 'Verification Marks of UK, Germany and The Netherlands. Anyone interested in UK verification marks from before 1878 will however still have to consult the work of Ricketts and Douglas.
- 'Postage Rates' for Britain, USA, Germany and The Netherlands from the mid 1800s.

These sections are invaluable for understanding, identifying and dating scales and will surely add enormously to the interest and enjoyment of those collecting them.

Add in the sections dealing with 'Miscellaneous Dates and Facts', 'Monarchs' Dates' and 'A Basic Library' and no one can doubt that the *Handbook of Old Weighing Instruments* is an essential and unique source of reference for all interested in the subject. I heartily recommend it!

The revised edition is now on offer at £15.00 or in the US for $30 inclusive of post and packing.

It is obtainable from: Roy Ladell, 93 Sydney Road, Bexleyheath, Kent, UK DA6 8HQ (Payment in GBP only please) or in the US from ISASC, 3616 Noakes St., Los Angeles, CA 90023 (Payment in USD only please).

Ken Govier

Postal Scales of the Dutch Scalemaker Velthoen

BY REIN KOK

During more than 150 years the PTT (Dutch Post) used different postal scales. Very little is known about the use of these scales and their scale-makers. A well-known name among the scale-makers is the name of J.S.Velthoen at Rotterdam.

In the development of the postal scales an important role was played by the Weight-and-Measure-Act of 1937. Claims of this act were:

* weighing has to go easily and rapidly
* weighing-instruments have to be shockproof
* parts have to be interchangeable and easily replaceable
* vibrations and temperature must have no influence upon weighing
* weighing instruments must have an unlimited life.

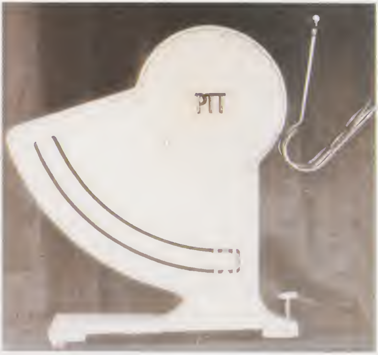


Fig. 1. Velthoen's post-war letter scale. This prototype is in the Museum of Communication at The Hague.

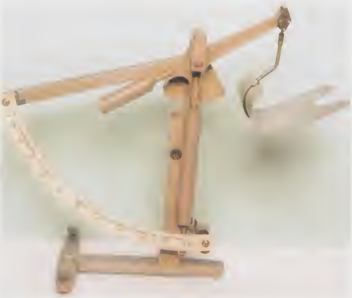


Fig. 2. Velthoen's 1950, type B with a capacity of 1000 grams.

At that time none of the scales in use met these claims. The Weight-and-Measure-Act came into force on 1-1-1941. Despite this many scales remained in use until 1950. This was caused by World War 2.

By 1948 the war had ended, but there was a shortage of raw materials for use in postal scales. During the war the necessary replacements could not take place, and now people tried to make up arrears. During 1948 the Velthoen-firm, in collaboration with J.N.Bosch (writer of the book *Weegwerktuigen [*= weighing-instruments], designed a new "dressed" model of a postal scale (fig.1) intended for the PTT. The mechanical part of this scale is hidden by a metal cover. This scale met the claims of the Weight-and-Measure-Act.

In the correspondence between Velthoen and PTT we read Velthoen could supply this letter scale at the price of 110.- each (about $30 at that time) exclusive of packing.

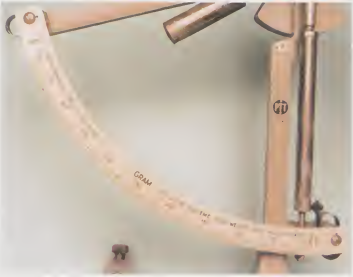
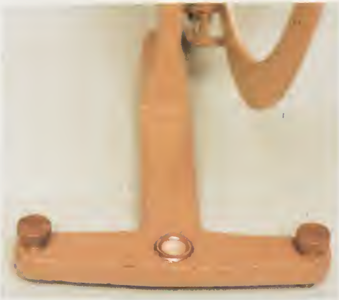


Fig. 3. The dial of this type C bears a date designation of 1955 on its right side. It shows a capacity of 500 grams.

Delivery of 100 scales would take six months and 1000 scales would be delivered within twelve months. A rough estimate indicated the Dutch Postal Service needed about 1800 scales. It was proposed to the Head of the Postal Service to buy provisionally 1000 of this scale. But the price of 110.- each was a drawback. It was too expensive. The price would probably decrease when the order was extended to the Dutch East Indies (at that time a colony of the Netherlands). Further information about this negotiation is missing. This postal scale never came into production. Why? It's unknown. It might be because the Dutch East Indies became independent and therefore the order became too small. The prototype of this scale is in the Museum of Communication at The Hague. It bears the number “VB 001” (VB=Velthoen/Bosch) and is 40 cm tall.

Fig. 4. View of adjustment screws and circular water-level.



In 1950 Velthoen and Bosch made a new design and this scale was used for many years in the Dutch post-offices. This design consists of 3 types:

type A with a capacity of 200 grams
type B with a capacity of 1000 grams (fig.2)
type C with a capacity of 500 grams.

The height of these three types is 40.5 cm and their mass is between 4 and 5 kilogram. The capacity depends on the counterweights. The frame is of cast iron. They all bear a serial number and a date between 1950 and 1972, which is stamped on the dial (fig.3). Also on the dial there are the words "Weegvermogen, gram. J.S.Velthoen & Zn.Uitsluitend bestemd voor weging van poststukken". (Capacity, grams, J.S.Velthoen & Son. Only for weighing postal packets). At the top of the scale is a triangle. This is an oil-damper, to avoid vibrations and shock of the pointer. Underneath there are two adjustment screws. Between these screws is a circular water-level.(fig.4) This was an excellent mechanical scale. About 2800 pieces were made and it was used in all post-offices in The Netherlands. But after 1972 the whole world went digital, so there was no place for this type of scale any longer.

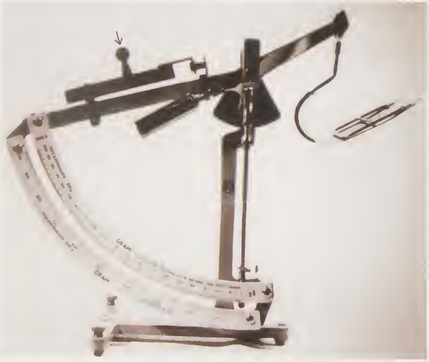
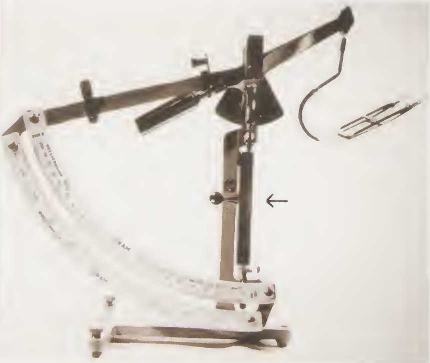


Fig. 5a. The Velthoen prototype of 1952 held an extra counterweight on its top arm.(see arrow).

Fig. 5b. The counterweight on the Velthoen prototype of 1952, is moved onto the pendulum (pointer) to weigh postal articles heavier than 200 grams.



In 1952 Velthoen showed another letter scale. On the frame of type A he put a second dial of 1000 grams. On the top arm at the left side of the standard is a lock with a counterweight intended for the 1000 grams scale (fig.5a). When weighing postal articles heavier than 200 grams, the counterweight was put on the pendulum (pointer) as shown in fig.5b. This type of scale was called "type D" with serial number "NR 1". It was a prototype but never went into production. This prototype is unfindable!! It only exists in photograph 5a.

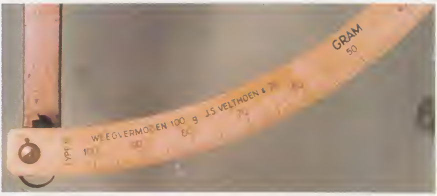


Fig. 6. ↑↑ The last zero of the numerals this type B scale were removed to create a type H scale with a capacity of 100 grams.

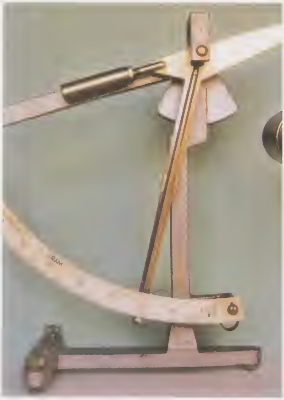
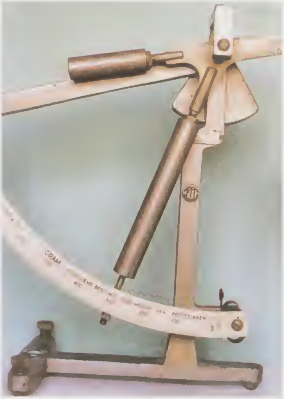
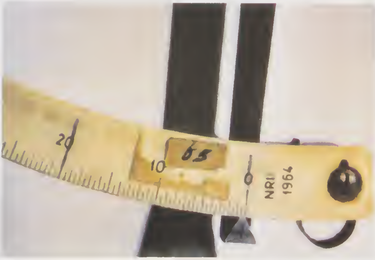


Fig. 7. ←← The inscription on the dial was removed and the serial number was changed into "NR 1". They gave the scale a smaller pointer and the shield, with the letters "PTT" in the centre of the standard, was removed.

Fig. 8. →→ Note the main differences in the two scales. In this verion the scale has a larger pointer and the shield, with the letters "PTT" in the centre of the standard, is quite evident.





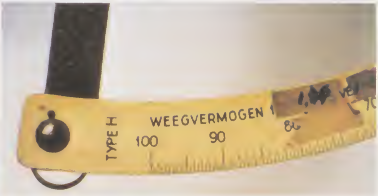


Fig. 9 & 10. ←↑ The dial of the scale shown in fig. 7 with tape, to update to the postal rates of the 1980s, glued on it

Some time later I was phoned by the editor of the Dutch Metrologic Society. He told me he found a Velthoen-scale with a capacity of 100 grams. I didn't believe it, for it didn't exist!! What was the case? The scale concerned was of type B (1000 grams). People had simply removed the last figure of each number: 100 became 10, 200 became 20 etc. Type B was changed into "Type H" (fig.6). The inscription on the dial was removed and the serial number was changed into "NR 1" (fig.7). They gave the scale a smaller pointer and the shield, with the letters "PTT" in the centre of the standard, was removed (fig.7 and fig.8). This particular scale was in use, as you can see on the dial: tapes with postal rates of the 1980's were glued on it (fig.9 and fig.10). Later on I removed the tape but the remains are still visible. The construction of this scale is done very professionally. I suppose this scale was an experimental one and was intended to be produced. But the digital period approached, so there was no longer a market for this type of scale.

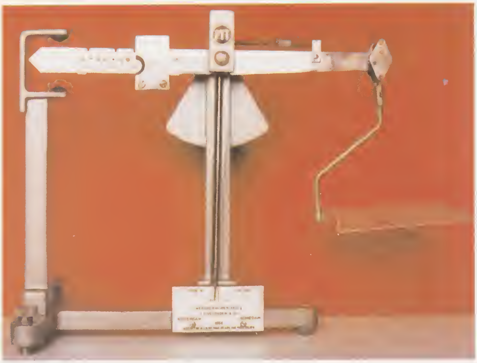


Fig. 11. ▲▲ The left-hand beam, of the steelyard scale, has a sliding Velthoen poise. When the weight was put at zero, the beam was in balance. The right-hand beam has an adjustment screw.

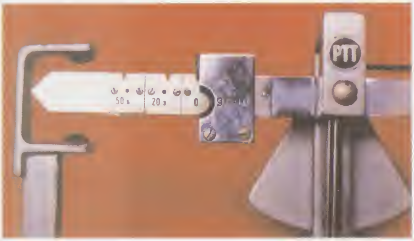


Fig. 11a. ▲▲ Detail of the beam on Velthoen's steelyard scale.

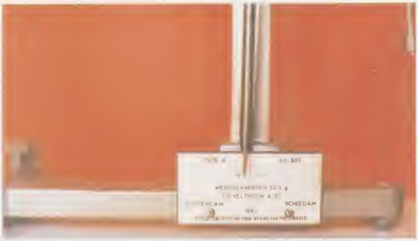


Fig. 11b. ▲▲ Detail of the pointer tip and name tag on scale 11.

A totally different postal scale of Velthoen was a steelyard (fig 11). It was a letter scale with two fixed points, one of 20 and one of 50 grams. Letters and other postal articles were sometimes checked if they were sufficiently stamped. If not they were surcharged. On the left-hand beam was a slide poise (fig.11a). When the weight was put at zero, the beam was in balance. On the right-hand beam was an adjustment screw. When the sliding-poise was put on 20 grams your letter had to be 20 grams

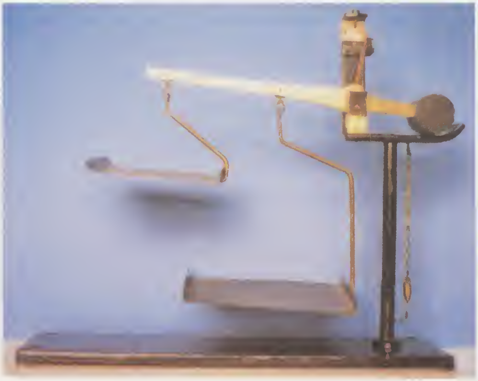


Fig. 12. ►► This postal scale was made by Haagse Balansen en Gewichtenfabriek (The Hague Balances and Weights Factory) and was in use in Dutch post offices prior to 1937.

for balance, but there was a margin of 0,3 grams. The margin for 50 grams was 0,5 grams (fig.11b). This scale was the consequence of the Weight-and-Measure-Act. The act provides the scale had to be in balance when not loaded. This was designed in the year 1956.

Before that time another scale was used with two pans. When unloaded the scales were not in balance (fig.12). The upper pan was used for letters of 20 grams, the other one for 50 grams. When one of the pans was loaded, the scale had to be in balance (or not). The adjustment was arranged with the plummet at the right-hand side of the standard. This scale was used before 1937. It was not a Velthoen-scale, but it was manufactured by the Haagse Balansen en Gewichtenfabriek (The Hague Balances and Weights Factory). All the postal scales mentioned are not used any longer.

Review

Württembergische Stein- und Metallgewichte, 1557-2000, by Claus Hager, price 44.80 Euros, plus packing and postage, available from Justin Koch, Rotebühlplatz 30, 70173 Stuttgart, Germany. 920pp. 600 illustrations. ISBN 3-00-016739-0.

This superb reference book is entirely in German, but I do not speak German. So why review it? It is an exemplary book for collectors - the first part, pp 21-81, introducing the history, geography and W & M Acts of Württemberg, the second part, pp 81-853, photographs of individual weights, ordered by date, and with relevant explanations interspersed, and the third part showing inspectors' marks and town marks. I went straight to the photographs, and by using a German translation service* I was easily able to understand every detail of every weight.

I like the stone weights for their quirkiness (eg. canon-balls strapped with brass or iron), but the metal weights were the real eye-opener, Claus Hager having found a huge variety of weights from the Württemberg area. He has included lots of catalogue pages, tables, inspectors' punches and other appropriate additions, each placed in the text where it helps most.

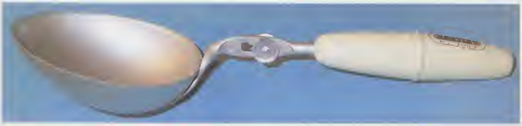
If you love weights, get this book. It will expand your knowledge and give you a lot of pleasure.

Diana Crawforth-Hitchins

*. http://babelfish.altavista.com/translate.dyn, free on the internet.

Showcase

This "Balansa Scoop" was made for weighing & measuring household recipes by V & N Hartley Ltd, Greenfield, near Oldham, England. The colorful original box has directions for using the scale in English, French, Spanish and German. It measures 9¼".



The instructions read as follows: *Scoop the ingredient out of the container and grip the finger pads with the thumb and finger of the right hand. Select the required notch, i.e., 1 oz. or ½ oz. and releasethe handle, allowing the scoop to balance between the finger and thumb.*

It is believed to date from the 1950s and is made from aluminum with a plastic handle. Private Collection

Howard & Co

BY DAVID THOMAS

Doing a search on ebay, I came across this puzzling scale. The text stated "*Howard Company Sterling Balance Scale with Gold Wash. Marked: Howard Co. New York Sterling. Most of the weights are marked: Sterling. Base measures 6 x $4^{1}/_{2}$ inches. Stands $2^{3}/_{4}$ inches high. Plates each measures $3^{3}/_{8}$ x $2^{5}/_{8}$ inches. Abrasions and wear on plates where gold wash is rubbed off. Scale is rickety with wire replacing some connectors. There are four nuts that hold the fulcrum to the dish. One nut is missing. Inside of dish has a dull luster. WEIGHTS: Five weights. Two $^{1}/_{2}$oz.; One 1oz.; One 2oz.; One 4oz. plus holding tray. All weights are nesting; ie, fit inside the larger one. Fantastic treasure and very unique!*"

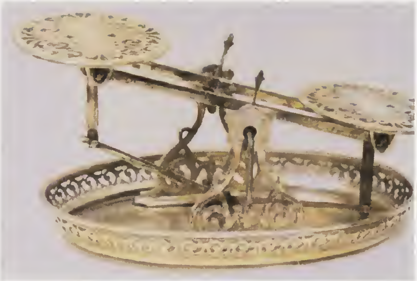


Figure 1. ↗↗ This gold-washed sterling Howard & Co. scale appeared on Ebay last year.

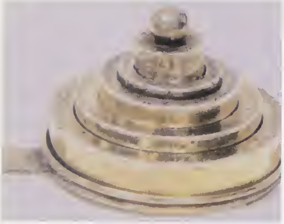


Figure.2. ↗↗ The nesting sterling weights accompaning figure 1 were detached from the scale.

So I studied the pictures, and realised that somebody had attempted to assemble the scale without comprehending how a roberval scale is constructed. I ignored the nail put through the fulcrum, and bent over like a pseudo-pointer, as that is just a temporary object holding it together.

But the base? With the name stamped on the upper surface? No, the base should be the other way up, with the fretted rim forming a dome-shaped base, and the stamped name under the base.

And the weight tray? Attached to nothing? Surely that should be mounted above the centre, silver-soldered to brace the A-frames. But that would mean that the upstanding pointers were in the way when attempting to lift out the 4oz weight.

So why are the pointers sticking up? The double beam has been put in upside down. The pointers should point down. And the pippin steels would then have the points at the top, not at the bottom of the bushes.

Some tender loving care would rapidly have this delightful silver scale with gold-plating looking superb.

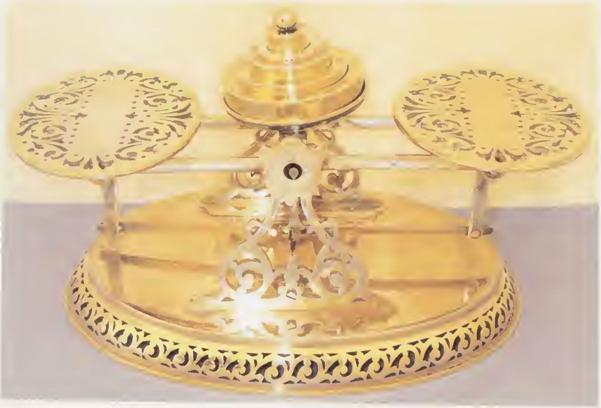


Figure.2. ↖↖ The same scale after restoration. A little of the gilding has worn off. The difference made by some gentle attention is amazing.

Showcase

Remember the Brower Gradenway, aka Grade-and-Weigh, aka Save-All, egg grader (see Figure 1)? I've never found the patent number for the Gradenway, but I have found magazine and catalog advertising for it from 1934 through 1941.

Figure 3 is an advertisement for the Gradenway 2-in-1 Egg Grader which I recently found in the Excelsior Stove and Manufacturing Company's 1935-1936 catalog.

Can you imagine my surprise when I discovered an ad (Figure 4) for a combination Gradenway 3-in-1 Egg Grader and Candler in that same catalog? I didn't know they made a combined version. Did you?

Charlie Amsbaugh Collection

Figure 1. ↗↗ Brower Gradenway or Save-All egg scale.

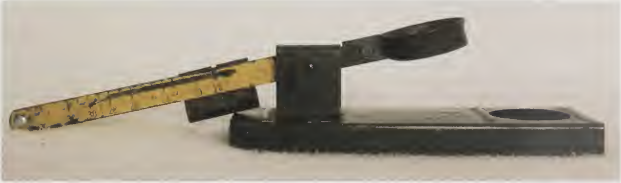
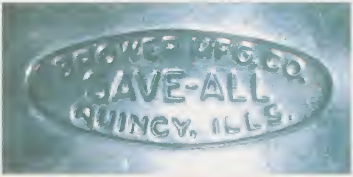
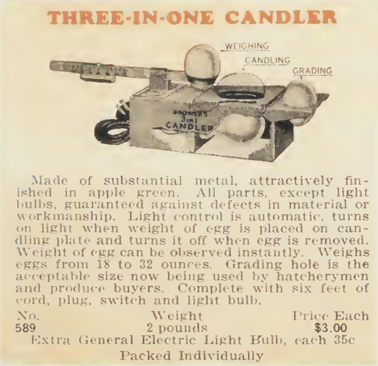


Figure 2. ↗↗ An stamped label on the bottom of the egg scale.




WEIGHING
CANDLING
GRADING
BROWER'S
3 in 1
CANDLER

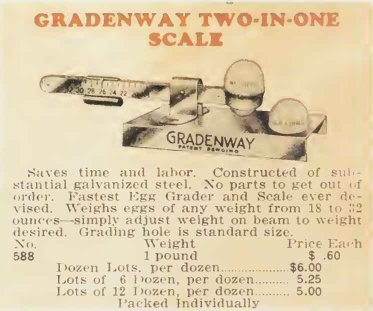
THREE-IN-ONE CANDLER

Made of substantial metal, attractively finished in apple green. All parts, except light bulbs, guaranteed against defects in material or workmanship. Light control is automatic, turns on light when weight of egg is placed on candling plate and turns it off when egg is removed. Weight of egg can be observed instantly. Weighs eggs from 18 to 32 ounces. Grading hole is the acceptable size now being used by hatcherymen and produce buyers. Complete with six feet of cord, plug, switch and light bulb.

No.	Weight	Price Each
589	2 pounds	$3.00

Extra General Electric Light Bulb, each 35c

Packed Individually


32 30 28 26 24 22
GRADENWAY
PATENT PENDING

GRADENWAY TWO-IN-ONE SCALE

Saves time and labor. Constructed of substantial galvanized steel. No parts to get out of order. Fastest Egg Grader and Scale ever devised. Weighs eggs of any weight from 18 to 32 ounces—simply adjust weight on beam to weight desired. Grading hole is standard size.

No.	Weight	Price Each
588	1 pound	$ .60

Dozen Lots, per dozen.................... $6.00
Lots of 6 Dozen, per dozen.......... 5.25
Lots of 12 Dozen, per dozen.......... 5.00
Packed Individually

Figure 3. ↗↗ This advertisement was recently found in the Excelsior Stove and Manufacturing Catalog of 1935-1936. It advertises the Gradenway two-in-one eggscale.

Figure 4. ↖↖ This ad dates from 1935-1936 and advertises the Gradenway three-in-one egg scale. To date no patent has been found for this egg scale. When the egg is placed on the candler plate the weight of the egg completes the electrical circuit and turns on the candler light. Brower Mfg. Co. of Quincy, IL made these scales.

Number 109 February 2007

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

On our annual trip to the south to escape the snow, Dian and I had occasion to visit with a number of our scale collecting friends. Our first stop was at Mercer PA to visit Les and Elaine Firth where we had an opportunity to view Les' scale collection. (Wow!! you have to see Les Grain Scale collection). Our next stop was Pittsburgh to see Mary Anne Murphy's collection wonderfully displayed in her turn of the century house right in the heart of the city. The following morning, Mary Anne took us to view the ISASC collection. Our congratulations to Mary Anne and her helpers (Les and Elaine Firth and Jerry and Mary Katz) in a first rate job of establishing the collection display.

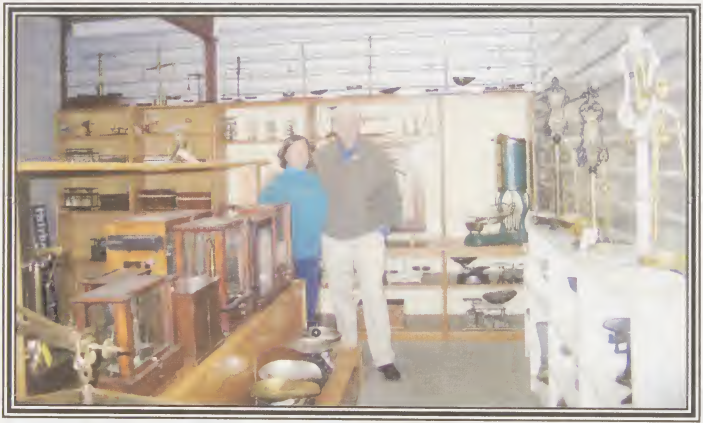


Figure 1 Mary Anne and Peter reviewing the ISASC Collection

I encourage all ISASC members, when they are in the Pittsburg area, to call Mary Anne and have her show you the collection.

As you might expect, and can see from the photos, the collection is stronger in some areas than others.

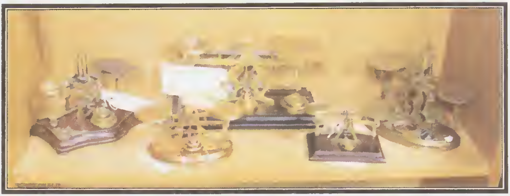


Figure 2 ISASC Collection Postal Scales

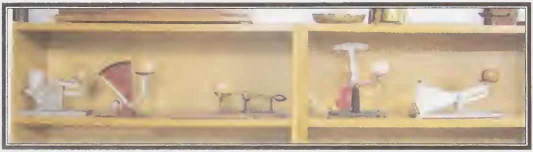


Figure 3 ISASC Collection Egg Scales

The committee is looking to improve the collection with scales in areas where there is currently a weakness and would like to start by augmenting the collection of egg and postal scales. If anyone has extra scales that could help in this area please contact Mary Anne. There are further details in the report of the ISASC Collection Development Committees that follows later in this news letter.

Then after spending a few days with our grand children in Columbus Ohio, we traveled to visit Phil Wehman, Chairman of the 2008 Convention to be held in Chattanooga. What an attractive and pretty city it is with many interesting things to do and see. While there, Phil was kind enough to review the plans and to show us all the venues selected for the convention. Please be assured that Phil and his committee are going to put on a great show. One of the high lights will be to view the extensive collections of Phil Wehman on the Friday and Willie Edens of Nashville on the Monday after the convention for those who can stay the extra day. Stay tuned for more information later this year.

Dearborn Convention May 17, 2007

By now you will have received the registration packet for the 2007 Dearborn convention. Plans are in place for another outstanding convention. A full agenda is planned that includes tours of the Henry Ford Museum, Greenfield Village and the Rouge Assembly plant. The Thursday night dinner will be held at the Fairlane Manor, the Henry Ford home, a tour of the home will be conducted prior to dinner. As well, a not to be missed optional tour on the Monday after the convention to view the Jim Dietrich collection has been planned. All of the regular activities, album sharing, silent auction, show and tell, special program presentations on Michigan Scale Makers and the annual general meeting will take place. Mark your calendar for May 17, 2007. Your convention committee is ready to welcome you to Dearborn. I encourage you to register early

Election of Officers to the Board of Directors

Included in the mailing of your EQM last November was a ballot for two seats on the Board of Directors, one for Treasurer and one for Vice President. The ballots are in and the results are now known. Les Firth has been reelected as Treasurer and Bob Jibben as Vice President. Both will serve for a two and one half years up to June 30 2009.

ISASC Collection Development Committee Report

Mary Anne Murphy, Chair of the ISASC Collection Development Committee, reposts the following. “The ISASC Collection Development Committee met in Alexandria, VA in early November. Thanks to the hospitality of Betty Wright and Kurt Beyreis, who generously provided rooms and meals for the committee, the entire committee was able to gather at minimal cost.

There was much discussion about where we are in our long range plan and what the next steps need to be. It was concluded that we have successfully completed the initial stage of setting up a display of the collection which can be viewed by members at their request. At this point, the collection is impressive at 400+ scales, but in need of further diversity, quantity and quality in order to be truly “museum quality.” Our next step is to solidify where we are and prepare to integrate further donations. (We are pleased to report that we have had a number of inquiries from members thinking about donating their collections).

In this regard, Kurt has volunteered to prepare a computerized overall inventory of the collection with photos, which will then be available in both printed and CD form. Thus all the information will be in the same format and easily usable.

It was concluded that the entire ISASC collection should probably not go on the website at this time, but that it would be great to have a section on the website called "Highlights of the ISASC Collection."

At the convention last May, some members asked us what we still need for the collection. Given that we need so much, the committee spent some time discussing how to provide a focused answer to that question.

Ultimately, we identified several categories which are very much under represented in the collection we now have: Egg scales, Postal scales (especially fine roberval scales), Counterfeit coin detectors. And of course, any rare and unusual scales would make wonderful additions to the collection.

There was also some discussion as to what is the ultimate goal here. The committee was in agreement that our goals are: (1) to preserve the scales entrusted to our care and (2) to work toward a situation in which we will have a superb collection and (3) to work toward a situation in which the collection will be able to be on public display. We believe that we are probably many years away from achieving the completion of step #2. Once we have a superb collection, we will then need to prudently and cautiously explore what options are available to us for public display. We keep reminding ourselves that it took 150 years for the Smithson collection, after its donation, to finally be displayed in a building—the Smithsonian. While we would like our process to not take 150 years, we do anticipate that this is a long term project, not one that is likely to come to a conclusion any time soon.

The committee was also very pleased with the support and encouragement this project has received from the membership."

Website Update

Carol Hayden our website editor reports the following updates.

- There is a new menu selection in Members Only called Collections on Display. This is a listing of collections of scales and weights that are available for members to see.
- In Members Only we have added Newsletter Euro Chapter with the latest newsletter from our sister chapter. We will be adding future newsletters as they become available.
- Under Annual Convention we have the links for the Program, Registration Form and Informational Sheet for the upcoming convention in Dearborn in May.

- New this year for your convenience we have a link to the Hyatt Hotel to make your hotel reservations online for the convention. Go to Annual Convention, Dearborn to access the link. It is specifically coded for ISASC and will list the rate applicable for the convention and up to two days before and after based on availability. It is a very easy way to make your hotel reservations for the convention and you will receive a confirmation via e-mail.
- The password for Members Only is "pendulum"."

Welcome To New Members

I would to take this opportunity to welcome the following new members and to encourage them contact any of the members of ISASC should they have any questions. Hopefully we will get a chance to meet them personally at the annual convention or regional get-togethers.

Charlie Brown, Livermore, CA, (Kay)
Robert W Dean, Willows, CA, (Joyce)
Marilyn McQueen, Athens AR, (Harold)
Stephen E Graham, Reno, NV, (Joan)

The Rice Lake Riddle

Doc has seven coins, which all look alike. Five have the same weight, while two are slightly heavier. Using a two-pan balance with no additional weights, how many operations does Doc need to determine which are the two heavier coins?

The Answer:

Doc designates the coins A through G. Of coins A through F, at least one is heavy, perhaps two. He weighs ABC against DEF. If the pans balance, each group of three contains one heavy coin. In this case, he weighs A against B (if they balance, C is heavy; if they don't, the pan that goes down holds the heavy coin), and then D against E (using the same procedure). Total: three operations.

If the pans do not balance when weighing ABC against DEF, let's say ABC is heavier. Doc knows ABC contains one or two heavy coins. He weighs A against B. If A is heavier, it is the first heavy coin, and the second will be found by weighing C against G. If the pans balance, the heavy coins are either A and B or C and G. The two pairs must be weighed against each other. Again, only three operations are necessary.

Antique Auction

Earlier Carol Hayden sent an email advising of an auction that has quite a number of nice scales. The Auction will be held March 3 and 4 at the Alexis Park Resort, Las Vegas. The website should you wish to see the items offered for auction is www.vegasauction.com.

Hope to see you all in Dearborn. Until then keep on scaling!!

Peter Laycock

Peter Laycock, President
ISASC

ISASC 30TH ANNIVERSARY

CONVENTION - MAY 2007

WHAT THE HECK IS IN HERE?

AND WHAT'S IN THIS PLACE?

MONDAY - MAY 21ST
FIND OUT WHAT JIM HAS HIDDEN AWAY IN HIS BUILDINGS

TOO MUCH TO THINK ABOUT; SO LET'S DO LUNCH IN FRANKENMUTH!

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2007 ISSUE NO. 2

PAGES 3237 - 3264

Cover Picture

Editor's note: *This issue is devoted to scales made in Michigan.*

Front Cover: This shows both obverse and reverse of a hanging scale from the W. F. Stimpson Co. about 1900. Patent Number 629,934 was applied for on April 25, 1898, and was awarded to inventor Walter F Stimpson of Milan, Michigan, on August 1, 1899.

Notice on the right-hand image that the dial moves counter-clockwise and clockwise on the computing side of the scale shown at left.

Collection of the Detroit Historical Museum.

Back Cover: Original artwork of W. F. Stimpson by W. J. Baker of the Detroit News from *Our Michigan Friends as we see 'em* by the Newspaper Cartoonists' Association, compiled by C. O. Youngstrand, 1905. Hand colored rendition of the original caricature and map of locations, related to Michigan scale makers, created by renowned maritime artist Robert McGreevy in February 2007.

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Article submissions are preferred in MS Word with Times New Roman Font size 12. Photos are best in 300 DPI Jpegs in a separate file with a maximum of 3 photos per Email.

Introduction

As we all know, there is a fever which is able to consume a scale collector, and that's what happened to us, Utz and Greg, when we found our first scales with traces back to Detroit in Michigan. In February 2005, we joined forces to make our initial stumbling steps and did not rest until we had buried ourselves under an enormous mountain of information. When we visited with Bill Berning to convince him to join us in our endeavor, surprisingly we found him under a mother load of papers and pennies, probably caused by his research on coin-ops. Our goal was to unfold the newly discovered tidbits of our local history during the "First ever ISASC – Michigan – Convention" in May 2007, thanks to Ben Smith's persistence. Believe us, the road was rough and it was extremely difficult to put the puzzle together, even with a lot of pieces in our hands. Thank God, our wives helped. They even hunted down and acquired new treasures for our collections and foremost allowed us to bring them home, a restriction that Jim Dietrich certainly does not have. He has gathered the finest collection of Michigan scales. Utz acknowledged this in December 2005 with the statement, "All roads for research on Michigan scale makers lead sooner or later to Jim Dietrich."

We then successfully also infected "outsiders" and they pulled their sleeves up and helped. Bill Berning and Charley Amsbaugh (contributing authors), Steve Beare (his genealogical finds amazed even him), Jan Berning (supplying valuable information, giving a start for Utz's patent search), Bill Bowman, Jim Dietrich, Bill Doniger, Dietmar Haenchen, Jerry Katz, Peter Laycock, Beverly Moss, Mike Owens, Larry Pugsley, Ben Smith, Shirley Schmidt and Judy Soslau. And then let's not forget our legal support (before they sue us), Nancy Diehl and William C. Lawrence, Jr. Please forgive us and include yourself in case we forgot to mention your name. Thanks to all of you—we never could have done it without your help.

Have these two years been wasted? Certainly not for us. We learned about Walter Stimpson, the genius and how he affected the world. We found mind-boggling connections to the worldwide scale industry. Our astonishment grew as we added more and more scale makers. And the never-ending addition to Utz's database on Michigan patents took its turn when he started to dread Greg's emails: "I found another one." For sure, Detroit and Michigan earned our respect and admiration. Foremost, we learned how much fun research can bring with a that-a-boy reward. For your own reading, please browse through our CD, available through ISASC. It contains the reference literature for our articles, pictures, advertising, all the patents and legal cases including their summaries, and much more.

Utz Schmidt and Greg Moss

(Nicknames: ***Greg the Seeker*** (borrowed from *Harry Potter*) and ***Utz the Stubborn*** who never gives up…or is the German confused and it's "never gives in"?)

The Founders – Contemporary Views

BY UTZ & SHIRLEY SCHMIDT

Nature blessed Michigan with an abundance of resources, the vast forest growth in the north, the extensive presence of iron and copper, and the rich farm land in the west. Are you aware of the fourth factor, which turned Michigan into an industrial powerhouse? It was the role which Erastus Fairbanks, the president of the E. & T. Fairbanks Company, a Vermont scale manufacturer, played here in Michigan. Owning considerable stock in Lake Superior mining, he sent Charles T. Harvey, his western sales agent, to check on the investments. Familiar with the Upper Peninsula, Harvey inspected the mining district and reported the existence of an "immense latent wealth in minerals." He also assured Fairbanks that the lack of a canal between Lakes Superior and Huron was the only major impediment to substantial profits. Immediately, Fairbanks organized the St. Mary's Falls Ship Canal Company, among whose officers and directors were some of the country's wealthiest financiers and industrialists. Harvey became the company's general agent

Soo Locks with Freighter Sewel Avery in 1940s.

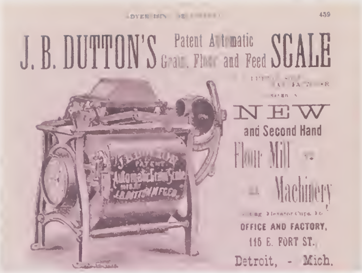
and land agent. Thanks to his relentless efforts, the Soo Locks were opened on June 18, 1855, after just 23 month of construction time. Now, the latent wealth was easily accessible. For more details please read the interesting article "Northern Passage at the Soo" from Shaul, Richard D., Ph.D., in the Michigan History, Vol 89, Number 4 (July/August 2005).

However, a scale industry would not have flourished without the presence of a number of far-sighted, innovative and inventive people who recognized the area's potential as a market for scales, initially for weighing grain at farms and mills but expanding later into the market of computing scales. Contemporary historians report in numerous publications about these "movers and shakers of Detroit's scale industry" and it is fascinating to follow their steps and involvement in various ventures, as well as to peek into their private lives and activities after hours.

In the following you find only three selected articles. They are accurate reprints of the cited source material. As you can imagine, there are many more important people who formed the flourishing scale industries in and around early Detroit, among these are the Barnes family, the Caille brothers, Thomas Comerford, and George H. Paine. Their involvement and adventures are fascinating reading material.

J. B. DUTTON & COMPANY by James J. Mitchell, 1891

Joseph B. Dutton was born at Findlay, Ohio, September 4, 1848. His father, a merchant tailor, died when the son was but two years old, and his mother removed to Pontiac, Michigan. Here Joseph was put to school until his twelfth year, when he was apprenticed to the milling trade under A. B. Mathews. He continued in this business for eight years, when he engaged with Bennett, Knickerbocker & Company in Jackson and Albion, Michigan, with whom he remained for five and a half years. For one year after this he was employed in the Union Mills at Detroit. In 1877 he removed to Chatham, Ontario, and embarked in business on his own account, starting the first new process mills ever operated in Canada. He continued here, doing a profitable business until 1884. In 1883 he first began experiments upon an automatic scale, which he perfected and secured patents for in 1884. Since then he has greatly perfected his invention and now holds eighteen patents to cover the improvements upon it. In June 1884 he began the manufacture of his automatic scale at 211 Jefferson avenue, Detroit, with A. Linabury as a partner. In 1886 Mr. Dutton formed a stock company with a capital of $100,000, ten percent, of which was paid in. The business was continued in this relation for one year, when Mr. Dutton bought in the stock and became the sole proprietor. The design of J. B. Dutton's Automatic Grain, Flour and Feed Scale and Register is for handling grain, flour and feed and in weighing and registering grain as it is fed to the first break of rolls. Besides weighing the grain, it automatically regulates its flow upon the rolls. It is especially adapted for use in elevators where it becomes necessary to weigh large quantities of grain



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J. B. DUTTON'S Patent Automatic Grain, Flour and Feed SCALE

NEW and Second Hand Flour Mill Machinery

OFFICE AND FACTORY, 116 E. FORT ST. Detroit, - Mich.

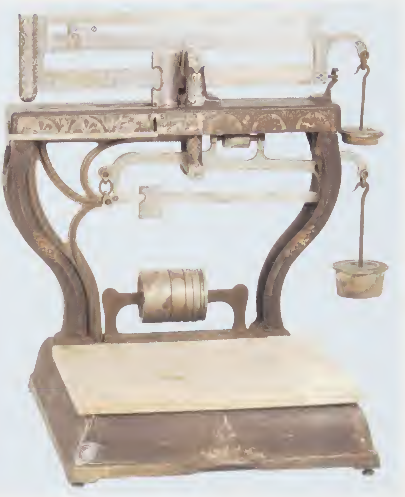
J. B. DUTTON'S Patent Automatic Grain Scale J. B. DUTTON MFG. CO.

Advertisement from Detroit City Directory 1888.

expeditiously, as also in breweries and malt houses for handling malt, barley, etc. Mr. Dutton also supplies the trade for all kinds of mill furnishings throughout the United States and Canada. The annual output is about 200 scales valued at $15,000 and the entire business amounts to $125,000 per annum.

FRANCIS CONRAD OSBORN

By Albert Nelson Marquis, 1908



F. C. Osborn patented the first computing scale for the Standard Computing Scale Co.

Osborn, Francis Conrad, President and manager F. C. Osborn Co.; born, Bridgeport, N. Y., Dec. 10, 1856; son of Ozias and Mary C. (Herbener) Osborn; educated in public schools, Cazenovia (N. Y.) Seminary and Syracuse University, graduating, degree of Ph.B., 1885; married at Huntington, Ind., June 22, 1891, Laura A. Freele; 3 children: Ruth, Laura, Francis C., Jr. Taught in public schools, Fayetteville, N. Y., 1880-82; traveling representative Ginn & Co., publishers school and college text books, Illinois, Indiana and Michigan, headquarters in Chicago, 1885-89; located in Detroit, 1889, and invented and designed several styles of cash registers and other machinery; organized the Osborn Cash Register Co., Ltd., 1896, and was secretary and mechanical superintendent of same until sold out to National Cash Register Co. in 1900; organized Standard Computing Scale Co., Ltd., 1899, to manufacture computing scales of his invention and design, and was general manager and secretary of same, 1899-1901, when he sold out; organized, 1901, the F. C. Osborn Co., manufacturers round paper box machinery, and president and general manager of the company; on inventions staff of the National Cash Register Co., 1900-4; invented and put on the market the O.K. Computing Cheese Cutter, now made and marketed by the Standard Computing Co.; has been granted thirty-six United States and foreign patents and has acted as mechanical expert in a number of important patent suits. Member Detroit Board of Commerce. Member American Society of Mechanical Engineers, Detroit Engineering Society, Franklin Institute, Delta Upsilon. Progressive. Club: Peninsular, Delta Upsilon. Recreation: automobiling. Office: 45-49 Fort St. E. Residence: 64 Lawrence Ave.

WALTER FRANKLIN STIMPSON

By Samuel Willard Beakes, 1906

Walter Franklin Stimpson, famous throughout the continents of North America and Europe as the inventor of the Stimpson computing scale, was born in Saline township, Washtenaw county, September 20, 1870. His father William Stimpson, was a farmer and was born in Windham, Greene county, New York, February 28, 1835. He came to Washtenaw county with his father, Theodore Stimpson, in 1842, and settled in the southern part of Saline township. For many years William Stimpson followed farming but retired from agricultural pursuits in 1892 and removed to Milan. His wife bore the maiden name of Maria L. Hurd and was a daughter of Dr. Isaac Hurd, of Milan. In the family were three sons: Walter F.; George Washington, of Milan; and Frederick Hurd, who is a farmer in Hale, Michigan.

Walter Franklin Stimpson was educated in the district schools of Saline township and at the Cleary Business College in Ypsilanti. He taught in district schools when about eighteen years of age, and it was at that period in his career that he began giving his attention to mechanical inventions. He invented the now world famous computing scale in the spring of 1893 and in April, 1894, organized the Stimpson Computing Scale Company.

On the 15th of February, 1905, Mr. Stimpson was married to Miss Estelle Heyn, a daughter of Julius and Jennie Heyn, of Toledo, Ohio. Although a consistent republican he has never taken a very active interest in politics, having little time to devote to anything outside of his busy career as an inventor and business man. He is a member of the Universalist church and at present makes his home in Detroit, where he and his wife occupy a magnificent suite of rooms in the Hotel Plaza. Washtenaw County may well be proud to be the native place of such a son.

[Excerpts from this article that cover Stimpson's business history have been moved into the article, "What Happened to Walter?" beginning on page 3246.]

Handy Postal Scales

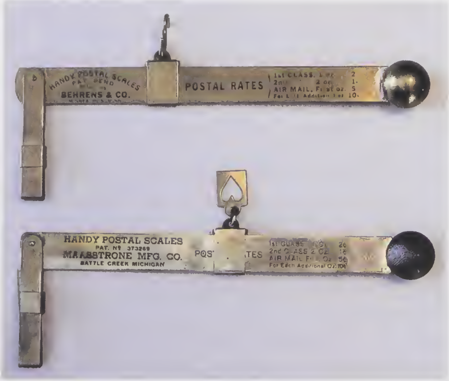
BY UTZ SCHMIDT

After three months of intense searching for Michigan-made scales at libraries, museums, and in other collections, and after reading information from Ben Smith, I realized that I own the twin of his scale. What a pleasant surprise.

The inscriptions on the Maasstrone scale reads patent No. 373,269. I glanced over it and was ready to close it again because it is the "wrong patent." The patent applied to a "Music Leaf Turner" from 1887 by J. T. Carrington and A. J. Sleeper of Clay Center, Kansas. The surprise came, with the detection under the patent's claim 9: " ...carrying leaf-holding arms, of spring-clamps E, ... having jaws e e extending forward at opposite sides ... clamping the back of the music..." Yes! This feature had been used to clamp the letter, I thought.

I closed the case until Jan Berning sent me a picture of one of her scales of the same design, together with the patent No. 1,872,646 from Aug. 23, 1932, by Henry J. Behrens of Lowville, New York. It protects "…various changes in its form, proportions and minor details of construction…" and the application was filed on June 24, 1929. This triggered a second round of research with the goal to date the scales by using the postal rates from the Internet, a treasure trove for researchers. The scales show 1st class, 2nd class, and airmail rates.

One ounce for 2 cents existed from the 1st of July, 1885, until the 6th of July, 1932, with a little increase for the two years during World War I. Looking for the 2nd class rates led nowhere. Airmail rates were set at 5 cents for the first ounce and 10 cents for additional ounces on August 1, 1928. These rates were in effect until July 6, 1932.



Behrens and Maasstrone scales about1930.

The Maasstrone (MI) and Behrens (MN/NY) scales are almost identical with two minor differences in arranging the text and the feature to hold the scale, which is a hook in one case and a square with a cutout heart shape in the other. The hook might be a repair at a later point in time. It is also worth mentioning: the sketch on the patent from Behrens is not identical with the design of either scale, but it protects the basic features.

Going back to the initial thought to use the patent for the music leaf turner, granting protection for 17 years could place the built date prior to 1904—but I don't think the Wright Brothers transported mail during their first flight trials. U.S. airmail postal rates began in 1918.

Likely, Maasstrone produced the scale with the full knowledge of the patent application from Behrens. But instead of marking their scale as Behrens did, with "Pat. Pending," they incorrectly used the Application Serial Number. What a coincidence that the Serial Number leads to the "Music Leaf Turner," which patents a feature that appears to be used by both manufacturers, but with a long-expired protection.

Greg added another, almost devious thought: "What if Maasstrone had intentionally used the Music Leaf Turner patent because he knew that Behrens had applied for a patent, and Maasstrone's choice was to use no patent at all or to list this old patent for marketing purposes? During those years, could someone know about and get hold of an application, and then "steal" the design until the patent was issued?" I dismissed it.

After evaluating all the above thoughts and facts, it can be assumed that the Behrens and the Maasstrone scales were certainly sold after the start date for the airmail postal rate on August 1928 but not prior to the Behrens' application date in June 1929. The airmail rate changed in July 1932, which occurs before the issuing of the 1932 Behrens patent, explaining that the correct patent number 1,872,646 could not be shown. This leaves a time frame for the use between June 1929 and July 1932.

Please contact the author in case you find a scale from either manufacturer with higher postal rates, which would indicate that the companies continued to produce this "Handy" scale.

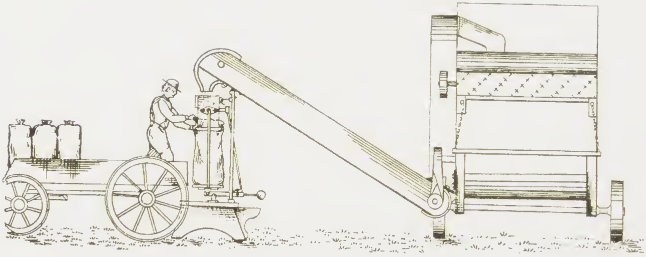
Are there Michigan Scale Patents?

BY UTZ SCHMIDT

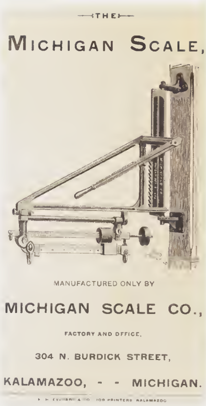
The lack of "brain trust" and good education are a recent hot spot in Michigan's newspapers. However, these challenges certainly did not exist in the late 1800s or early 1900s. There were an abundance of inventors in Michigan. Otherwise, how would the automotive industry, with its entourage of suppliers, have flourished? And then there was Thomas Edison from Port Huron, the most prominent inventor. If it had not have been for him, we might still sit in the dark.

Without a doubt, the Michigan scale makers had their share of inventors. Believe it or not, we found, through their 286 patents, a "mere" 118 creative men. Wow! The oldest scale patent dates from April 10, 1860, with the number 27,851. The inventor, John Williams, lived in Kalamazoo and fits the observation Greg made when he went through the earliest of our state's patents in US scale patent class 177. He found that they are mostly for grain scales at locations along the train tracks from Chicago to Detroit, our grain belt. Interesting enough, reading through the U.S. patents up to 1910 that were held by Germans, the majority also are grain and automatic scale contraptions. The management of the food supply for the rapidly growing cities was obviously the number one concern. Sears, Roebuck and Co. used this need for the promotion of their scales in the fall 1900 catalog. It reads: "EVERY FARMER should own either a set of wagon scales or platform scales. A farmer should not sell a load of grain, a bale of cotton, a hog or steer that has not been weighed on his own scale. Your scales will check mistakes and detect dishonesty and will pay the cost ten fold in a few years."

Not all ISASC members will strive to own one of these scales but we have to admit they are certainly an important step during the evolution of scales to today's high tech designs. And then again, the intricate drawings for the patents are certainly works of art, worth being collected.



No. 237,670 patented Feb. 15, 1881 - Grain Meter



Ad: Michigan Scale Co., about 1879

—THE—

MICHIGAN SCALE,

MANUFACTURED ONLY BY

MICHIGAN SCALE CO.,

FACTORY AND OFFICE,

304 N. BURDICK STREET,

KALAMAZOO, - - MICHIGAN.

[illegible] JOB PRINTERS KALAMAZOO

The big breakthrough for the fledgling scale industry came with the idea of a teacher from Milan, Michigan, Walter F. Stimpson, to record in a simple way the weight and price of grocery items, such as meat and produce, in one single step. Thereby, the useful computing scale was born and the seed was planted for Michigan's Computing Scale Industry with impact on the USA and reaching as far as Europe. Please read more about this genius in the article "What Happened to Walter?" beginning on page 3246.

Louis Jaenichen, with 43 scale related patents, is certainly the Michigan leader. He filed his first patent as a machinist for the Standard Computing Scale Company, just eight years after it was founded, and he faithfully stayed on. He is also the last patentee for the company with an award in February 1938. Meanwhile he had moved up to be the superintendent of the scale factory. Please read more about him in the article, "The Standard Computing Scale Company" beginning on page 3252.

Bert King is the third in the big league of inventors for weighing instruments with 21 patents. His career reflects the continuously changing scene of scale makers in Detroit. For a handful of years, he worked for the Standard Computing Scale Company of Detroit as a foreman, and then he was drawn into the whirlpool of the "Stimpson Weighs." Located in Detroit, he had a several assignees: the Detroit Automatic in Elkhart, Indiana, the Computing Scale Co. of Dayton, and the Detroit Automatic in Detroit, where he was a master mechanic at that time. Even then it was like nowadays at your workplace, you have a hard time keeping up with the company name and owner. Very likely fed up with the turmoil, he attempted to be on his own, living off his genius and royalties; so he held the next patents himself and is listed as "inventor" in the 1920 census. But this period lasted just a year when he joined the Barnes Scale Company of Detroit. This was his most creative time. He worked on various types of scales and even on coin operated scales.

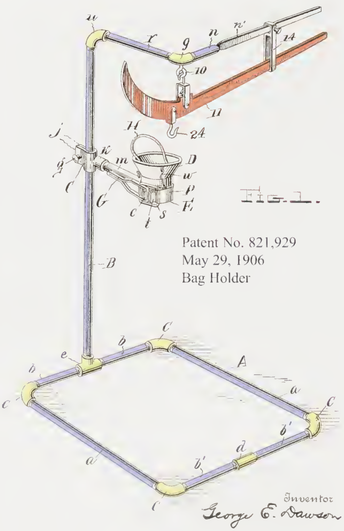
The above three, our "brain trust," created 41% of all the Michigan scale patents; they in return represent only 2.6% of all the inventors for scale patents. They truly cornered the market. It's also an astonishing fact, considering the expenses involved, that only 51% of the inventions are held by a third party, mostly by a company or its owner.

Don't think for one single moment that the rest of the inventors had nothing to offer. Each patent is a new revelation. I have selected just a few of their interesting designs. The advertisement shown and also the scale are, through a stroke of luck, part of my collection. The design is by Leonidas G. Wooley.

Henry C. Herr takes a special place among the early inventors in the field of computing scales, filing for patents while being a manager in a family-owned business making egg cases in Port Huron. In 1904, he disappeared from the St. Clair County directory. It seems that he did not see a big future in the computing scale industry, or he received an offer he could not refuse; so around 1903 he sold his three patents, as seed money for future ventures, very likely to the Computing Scale Company of America. A few years later in 1907, one patent, filed in March 20, 1899, was mentioned in the Supreme Court case "Computing Scale Co of America v. Automatic Scale Co." The next census in 1910 places him in Detroit as a cooperage employer. But his adventurous spirit and the search for the new did not let him rest, and so he appears in the 1920 census as a silk industry employer in Buffalo, NY.

Jan Berning unwittingly, but far sighted, helped us with her nice article, "Carter's Standard," in EQM 2001, Issue 3, pages 2607 ff., to show off another interesting Michigan product, which is an unequal arm balance that features a weight indicator dial on the poise. And then there is the disgruntled porter who invented a "Baggage Scale" for trunks. The machine is gorgeous but might have had issues at the point of moving it with its sheer size. The list goes on and on with inventions of a Hydrostatic Scale, a Recording Dairy Scale, quite a few Mail Weighing Scales, and a Press to Pack and Weigh Bran, just to give a few examples.

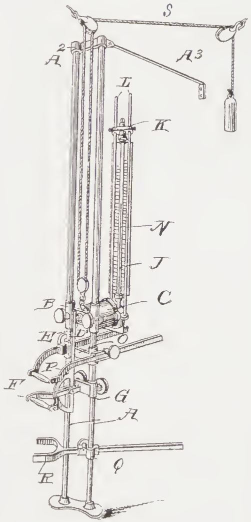
The patent from MI inventor George E. Dawson falls under my class of "American Ingenuity." Just see the set up, made out of standard pipes—it is simple, low cost, and geared for mass production, enthusing me, the German engineer. By the way, it took me quite a few years before I understood the simple ways of design and early standardization here, in comparison to the German way that turns everything into a complex watch.



Patent No. 821,929
May 29, 1906
Bag Holder

There is another item that deserves to be mentioned: Dr. John Harvey Kellogg's Muscle Tester. How would our health be without his family's cereals for breakfast? After seeing the movie, "The Road to Wellville," with Anthony Hopkins impersonating John, you can vividly imagine the use of John's contraption and make the connection to the movie's advertising, "What doesn't kill you will only make you stronger."

As diverse as the patents are, so are the origins of the inventor names. A few examples—Armchambault, Beutler, Buckingham, Schultz, Williams—guide you through France, Germany, England. Michigan certainly proved to be a melting pot of multiple nationalities. I have to admit, it is true that not all of our inventors are native Michiganders—or possibly not even Americans in some cases. From Louis Jaenichen we know as a fact, that he came from Germany at just eight years old in 1872.



No. 528,779 patented Nov 6, 1894 – Testing Machine by Dr. Kellogg.

It seems that nothing can be completed without a lawyer. The names helped to analyze the relationship between some of the manufacturers. The list of prominent patent attorneys in Detroit comprises Barnes, Stuart C.; Barnes & Kisselle; Barthel & Barthel; Charles H. Fisk; Hardesty, Francis C; Kerr, Page, Cooper & Hayward; Pagelsen in various forms; Sprague, Tho & Son; and Whittemore, Hulbert & Whittemore.

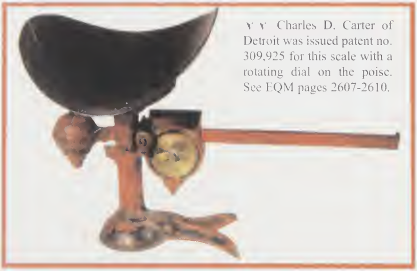
During my early patent search, I found No. 1,147,127, filed in May 18, 1912. It pertains to a Load Indicator for Motor Trucks from Frederick J. Troll of Baltimore, Maryland. I carried it around in my files as a curiosity, and I always hoped for something similar, locally bred. I got my wish when Allen W. Fairchild came through for us with No. 976,351, filed Sept. 29, 1909. It is for "a mechanism adapted to be assembled with the bolster of a wagon or sleigh to indicate the weight of the load upon ..." This Wagon-Scale patent precedes the Baltimore one by 2½ years, considering the difference in the application dates. The system is quite crude mechanically, but he was the first, even if it is not such an elegant electro-mechanical solution as Troll's and does not have the alarm in case of overload. Once more, we kept our edge for automobiles—or sleighs, in this case. This shows the former strength of Michigan and closes the loop to the first chapter of this article.

Showcase

➢➢ Ornate hanging horizontal barrel style scale by Stimpson Computing Scale Co. Detroit, MI.

▲▲ Patent number 766,777 was issued to Walter F. Stimpson of Detroit, MI on August 2, 1904. The poises for this scale are applied by means of a lever system. The user lifts the lever engaging the poise to balance the load.

➢➢ Patent No D176,048 was issued to H. L. Walborn of Jackson on Nov. 8, 1955.



▼▼ Charles D. Carter of Detroit was issued patent no. 309,925 for this scale with a rotating dial on the poise. See EQM pages 2607-2610.

Cheese cutter by Stimpson Computing Scale Co., Detroit.

What Happened to Walter?

BY GREG MOSS

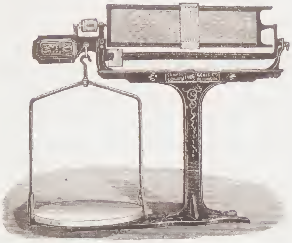
In 1893, a 22-year-old schoolteacher walked into the local grocery in Milan (a small town south of Ann Arbor, Michigan) and joined a group that "was agog over a wonderful new machine which the storekeeper had installed. It was a new-fangled apparatus that would weigh and compute the money value of country butter, eggs and other products..." A week or two later, he found the storekeeper *had sent the scale back because of the four operations necessary in arriving at the weight and money value.* [Likely, this was from the Computing Scale Co., Dayton, OH] *...He determined to make a scale that would tell the weight and money value of a commodity by moving a slide or indicator one time only.*

Procuring an old scale he began his experiments. With the crude tools available in the blacksmith shop on his father's farm, young Stimpson worked on his model. The hardest obstacle encountered was the making of the computing beam, the size of which was 24 inches long and 5 inches wide, covered by over 10,000 figures and graduations. These he stamped on a piece of sheet brass each one separately, by hand, the location of each mark having to be accurately measured and determined. (Source: Courier Journal, Louisville, KY, Jan. 17, 1924).

That is the beginning of how Walter F. Stimpson got involved in the scale industry as inventor, salesman, entrepreneur, and businessman. He certainly was an inventor, salesman, and entrepreneur; but the evidence suggests the "businessman" aspect was not his strongest suit. However, our interest and search for the elusive "Walter" did not start here. It started with a list of patents bearing Stimpson's name and scales made by different Stimpson companies in Detroit, Elkhart, IN, and Louisville, KY. Then, there were other Michigan towns that showed the Stimpson brand: Milan, Tecumseh, Milan (again), and Northville. There were so many companies with the Stimpson name that it seemed like there was more than one company at a time. And there was! So…why?…and what happened to Walter?

W. F. Stimpson Scale Company Detroit, Michigan about 1900.

Surprisingly, Stimpson's famous scale patent, 543,323, was not his first! Patent 476,027 was for lowering reels on a harvester, filed in 1891, before he reached his 21st birthday. And, he filed a design patent for a scale standard on the day before he filed for the computing scale patent. The intrigue is that a witness on the Stimpson's early scale patents was Mell Barnes—the Milan banker who became an officer in Stimpson companies, lost lawsuits against Stimpson, and eventually established another scale company in Detroit, the Barnes Scale Company.

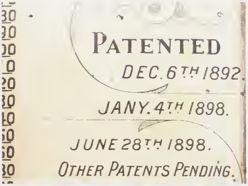

Stimpson Computing Butcher's Scale, made in Tecumseh, Michigan. Ad Jan. 30, 1896.

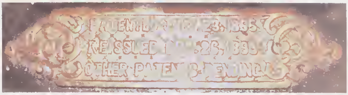
Do you have one of the "original" Stimpson scales? This is where most of the confusion exists, because we know it was made by at least four Stimpson companies, maybe five. Today, the most frequently seen scale is by the Stimpson Computing Scale Co., Elkhart, and the patents listed are years like 1892, 1898, and 1900. However, scales with these patents are actually newer than identical scales with patents starting in 1895. The catch is that Stimpson's famous computing scale patent was issued on July 23, 1895. He started manufacturing in Milan in 1894 with "patent pending" and then formed a corporation that manufactured in Tecumseh. Now that he had a patent, Stimpson got out of managing the business and signed a letter of agreement for use of his patents. After a year or so, in 1896, the corporation moved to Elkhart. So there must be a version of the scale from Elkhart with Stimpson's 1895 patent date.

Stimpson Computing Scale Co., Elkhart, IN about 1899.

Here is part of the Stimpson story written by Samuel Beakes in 1906 (see the article: "The Founders – Contemporary Views" pg. 3239): [The Elkhart company was] *paying Mr. Stimpson royalties on the entire output of the plant for the use of his inventions. This arrangement continued until the concern grew to be very prosperous. It was at that time, it appears, that a* *scheme was concocted by the managers to annul his royalty compact and deprive him of his royalties and the fruits of his labors during the preceding eight or nine years. The contract was annulled in March, 1899, and the company refused to pay further royalties. By the annulment of the contract the control of Mr. Stimpson's patents returned to him…*

My conclusion is that, after writing the letter in 1899, the Elkhart company used other patents—like the one from 1892—which were not Stimpson's. Therefore, the 1892-patent scales are *newer* than the 1895-patent scales…except.





Top: Stimpson Computing Scale Co., Elkhart.

Bottom: W. F. Stimpson Co., Detroit.

Except that, in the meantime, Stimpson formed Stimpson, WF & Co in Detroit with his uncle and brother, and this was followed in 1900 by the W. F. Stimpson Co. The W. F. Stimpson Co. was a powerhouse of men from the Detroit business community Sherman Miller, President and industrialist; John Leggett, VP, a well-known lawyer and director of multiple companies; George Paine, Secretary and Treasurer and known for industrial investments; and Walter Stimpson, General Manager.

The W. F. Stimpson Co. began making and selling the same scales previously made by the Elkhart company, but (of course) they used the Stimpson 1895 patent. Therefore, the W. F. Stimpson 1895-patent scale is newer than the 1892-patent scale from Elkart. Right? Not necessarily. Returning to Samual Beakes' writing: "While the Stimpson Computing Scale Company of Elkhart refused to pay royalties, yet it continued to use Mr. Stimpson's inventions, and no sooner had the W. F. Stimpson Company of Detroit gotten under way than litigation was brought by each concern against the other. The case came up in the United States court in Detroit in March, 1900. The suit was hard fought with capital on one side and the inventor with his capital on the other. The best legal talent in Chicago and Detroit was employed and the result was a complete victory for Mr. Stimpson and his associates. The case was then appealed to the circuit court of appeals and came up in Cincinnati in the summer of 1900, but Mr. Stimpson gained a second victory, his rights being sustained and an injunction granted against the Elkhart concern restraining them from further use of his patents and his name [Stimpson Computing Scale Co. v. W. F. Stimpson Co. et al]. Subsequently the Stimpson Company of Elkhart was glad to sell out to the Detroit concern at a very reasonable price, which they did in the fall of 1900, and a year or two later the factory and business of the Elkhart concern were moved to Detroit."

George Paine had engineered the purchase of the Elkhart company and eventually moved the manufacturing to Detroit. The Stimpson Computing Scale Co., with its well-known name, was kept as the marketing arm, and the W. F. Stimpson Co. became the manufacturing unit. At this point, the computing scale industry was concentrated in Detroit and Dayton, Ohio. But there was this new competitor, right between Detroit and Dayton—the Toledo Scale Company.

ROMANCE OF A MILAN GIRL
WENT TO DETROIT ON A VISIT

And While There She and Her Sweetheart
Went to Windsor and Got Married

When Miss Bertha M. Cone of Milan, Mich., went to Detroit about two weeks ago to visit a friend, she had no intention of getting married, having planned simply a pleasant vacation. Just a week ago Miss Cone returned to Milan, however, as Mrs. H. Clay Pepper.

H. Clay Pepper, the young groom, is an employe of the Stimpson Computing Scale Co. in Detroit, and before he went to Detroit from Milan, a little over a year ago, was the avowed sweetheart of Miss Cone. Life in the big city did not cause Mr. Pepper to forget his village sweetheart and when he met her last week he proposed that they get married at once.

"We just thought," said the blushing groom, who appears about 20 years of age, "that we would get married, so we went over to Windsor a week ago Friday, and Rev. Alfred Brown, the Methodist clergyman, performed the ceremony. Saturday we went back to Milan to break the news to our families. Such things travel fast, however, and before we could see our friends most of them knew it already."

Mr. Pepper is a son of Mr. and Mrs. Olen Pepper of Milan, and Mrs. Pepper is a daughter of Joseph Cone of the same place. They are living now in Detroit.

Ann Arbor Courier-Register, March 13, 1904

Whether or not this new competition was the instigator, we will never know, but the fact is that the W. F. Stimpson Co., with its powerful board, formed a trust with the Computing Scale Co. of Dayton (including the Moneyweight Scale Co., which was the Computing Scale Company's marketing arm in Chicago). The trust, called the Computing Scale Company of America, became the "C" in 1911 for a new company called C-T-R, or the Computing-Tabulating-Recording Company, which was renamed to International Business Machines in 1924. Fascinating!

Back to Walter…He got out of managing the business when the Computing Scale Company of America (CSCA) was formed, and he licensed his name and patents to CSCA. But he was not idle. He went back to Milan and formed the Stimpson Standard Scale Company, making "heavy scales such as wagon scales, portable platform scales, truck scales and other specialties of Mr. Stimpson's invention, including coffee mills, meat choppers and other apparatus for use in grocery stores and markets," as written by Samuel Beakes. As you can see in the "Romance" sidebar, he affected a number of lives and may never have realized his impact. Stimpson also was president of the Stimpson Land Co. and the Stimpson Mercantile Equipment Co. (a marketing arm for his manufacturing), he married Estelle, built a hotel in Milan (still standing), and moved his scale business to Northville. By this time, he was also making and selling coffee mills and meat grinders.

While in Northville, patent research uncovered an interesting pattern. Stimpson suddenly began assigning his patents—first to his wife, then to his uncle (George Hurd), then to a bank. Was there financial trouble? Definitely. The Stimpson Scale & Manufacturing Co. went bankrupt. It was re-established by new owners as the Stimpson Scale & Electric Co., still in Northville, and Walter stayed on for a while as vice president.

At the same time, back at the Computing Scale Company of America, they were working diligently to replace Stimpson's patents with ones of their own. As they progressed, they changed the name of the Stimpson Computing Scale Co. to the Detroit Automatic Scale Co. in 1912 and ended the contract with Walter in 1914.

However, this was not the end of the Stimpson Computing Scale Co.; rather, it was the beginning of a very successful and long-lasting company, this time in Louisville, Kentucky. Since C-T-R had given up the name, Walter was free to form a new Stimpson Computing Scale Company, and Louisville was anxious to develop its industry after World War I. He continued to invent, not only patents for scales, but also a patent for a variable pitch airplane propeller!

Although he maintained ties in Detroit, he died in Louisville in 1942, and the company was sold to Globe in 1947. For the next 40 years, the Louisville plant produced scales and other meat processing equipment under the brand of Globe-Stimpson. And even as late as 1980, before the wave of digital scales, an early Stimpson patent was used as a reference in a new patent. Walter's legacy was still alive. Finally, in 1987, the Louisville building and equipment were sold at auction, and the Stimpson name disappeared from the list of scale manufacturers—a run of almost 100 years.

1920s Stimpson Computing Scale Co.Louisville, KY

Walter Franklin Stimpson
Sept. 20, 1870 – Aug. 17, 1942

Held 74 Patents:
66 for scales & designs, 8 other
Stimpson Companies: 14
Married Estelle Heyn, no children

Walter Franklin Stimpson born
Saline Twp, MI
20-Sep-1870

1st scale patent
filed 25-Sep-94
granted 23-Jul-95

1

Contract with Stimpson Computing Scale Co.
signed 31-May-95
end notice 6-Mar-99
ended 7-Sep-99

Stimpson Computing Scale Co. v. W.F . Stimpson Co.
US Circuit Court of Appeals, 7-Nov-1900
ruled in favor of W.F. Stimpson Co.

Contract with Computing Scale Co. of America
1902

Stimpson Land Co.
(WF Stimpson, Pres.
Detroit, MI
1904 ±

Stimpson Computing Scale Co. (Ltd)
Limited co-partnership
Milan, MI 1894

Stimpson WF & Co.
Officers (Stimpsons):
Oscar (uncle)
Walter
Frederick (brother)
Detroit, MI
1899

W.F. Stimpson Co.
Mfg & Sales
Detroit 1900 – 02
G.F. Paine (Pres.) buys Stimpson Computing Scale Co., Elkhart, IN

Stimpson Standard Scale Co.
Milan, MI
1902 – 04

Stimpson Computing Scale Co.
Tecumseh, MI
1895 – Jun-96

Stimpson Computing Scale Co.
Elkhart, IN
1896 – Aug-04

THE STIMPSON WEIGHS

Computing Scale Company of America
New York, NY
formed 1902

Computing Scale Co.
Moneyweight Scale Co.
W.F. Stimpson Co.
(Stimpson Computing Scale Co)

Canby & Ozias
Dayton, OH
1891

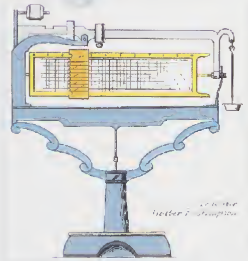
Computing Scale Company
Dayton, OH
1891

Detroit Computing Scale Co.
Detroit, MI
1888 – 91

Moneyweight Scale Co.
(marketing arm of Computing Scale Co.)
Chicago, IL
1899

The Pitrat Computing Scale Co.
Gallipolis, OH
1885 – 89

1



2

Estelle Heyn
married
1905

Contract with Computing
Scale Co. of America
ended 1914

Walter F. Stimpson
died
Louisville, KY
17-Aug-1942

Estelle Stimpson
died
Toledo, OH
18-Mar-1959

Stimpson Mercantile
Equipment Co.
WF Stimpson, Pres.)
1905 ±

Stimpson Specialty
Co.
Northville, MI
24-May-07 – 11?

World War I
1914 – 18

Stimpson Computing
Scale Co.
Louisville, KY
1919

Globe Slicing
Machinery Co. buys
Stimpson Computing
Scale Co.
1947

Stimpson Computing
Scale Co.
equipment, building,
land sold at auction
1987

Stimpson Scale &
Manufacturing Co.
Milan, MI
1905 – 06

Stimpson Scale &
Manufacturing Co.
Northville, MI
1906 – 11

WF Stimpson, VP 1911 – ~15

Stimpson Scale & Electric Co.
Northville, MI
6-Dec-11 – 9-Sep-26

4

3

2

Stimpson Computing
Scale Co.
(sales)
Detroit, MI 1904 – 12

W. F. Stimpson Co.
(manufacturing)
Detroit, MI
1904 – 14

3

Detroit Automatic
Scale Co.
(sales)
Detroit, MI 1912 – 21

Detroit Scale
Manufacturing Co.
Detroit, MI
1914 – 21

National Counting
Scale Co.
1932

4

Scale business
consolidated into
Dayton Scale Co.
1921

Hobart
buys Dayton Scale
Co. from IBM
1934

Computing-Tabulating-
Recording Co.
Endicott, NY
formed 15-Jun-11

Computing Scale Company
of America
Tabulating Machine Co.
Int'l Time Recording Co.

C-T-R renamed
International
Business Machines
Endicott, NY
14-Feb-24

Int'l Scale Co.,
subsidiary of IBM
1930

International Scale Co.
(was American
Automatic Scale Co.)
1917

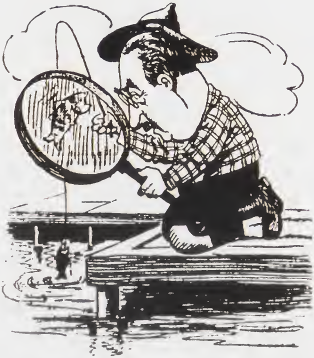
© 2007 Greg Moss

The Standard Computing Scale Company

BY UTZ SCHMIDT

The saying proves true once more: "The more you know, the more questions you have." Even with the abundance of information about the Standard Computing Scale Co., a lot of guesswork is still involved; so don't be astonished, when there is a correction or amendment down the road.

Thomas F. Comerford 1913



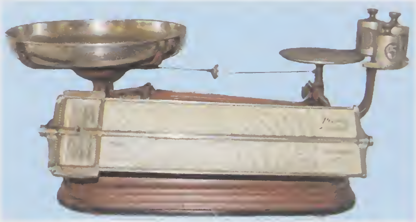
Francis Conrad Osborn organized the Standard Computing Scale Co., Ltd., in 1899, "to manufacture computing scales of his invention and design," and he was general manager and secretary. Thus he brought in that vital engineering ingredient for the young company.

But engineers are quite often not very good in managing money, and that's where Thomas Francis Comerford with his financial background came in. He was the president from the date of the organization of the corporation and, at the same time, the secretary and treasurer of the Michigan Optical Company, a convenience for later needs. It proved its value starting in 1911 with a series of lenses for accurate readout and other optical aids, as mentioned below. The partnership between the two men did not last: in 1901, Osborn had already sold out. He then invested his money in the F. C. Osborn Company of Detroit and continued with a series of patents for various types of scales. Comerford remained president of Standard. "In 1922 he also held the positions of a director of the Sunny Line Appliances, Inc., as well as being a director at the Sievers & Erdman Company," Clarence M. Burton, our historian, reports. The company blossomed under his leadership, very likely because he was able to attract talent. The Standard Computing Scale Company held 68 scale patents, more than any other Michigan scale maker.

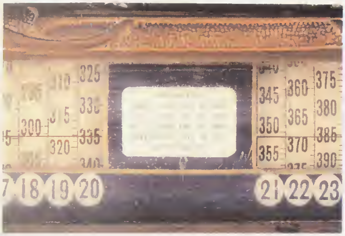
Louis Jaenichen, their most creative inventor, remained with the company for at least 31 years of his career. His biggest contributions in my eyes are a series of patents, starting with No. 901,297, issued Oct. 13, 1908. He stepped away from the platform design for computing scales back to the good old equal arm balance.

Next in line is his barrel top design. An upscale version with light is shown on page 3254. The company claims in their advertising to have "The most artistic looking scale ever placed on a Merchant's counter." Then third (No. 1,356,287, Oct. 19, 1920) was the continuous lens over the length of the barrel top for those of us who can no longer read the fine print (see next page). The above advertising continues here with the sentence: "The value and weight figures are largely magnified so that the reading of them is made easy."

Let's now turn to the leaders of the company. We already heard tidbits about Thomas F. Comerford. He married, on May 19, 1900, Josephine Warren, a daughter of Charles B. and Julia Warren. His stepson, Charles Byron, was two at that time, born July 20, 1898. As we saw

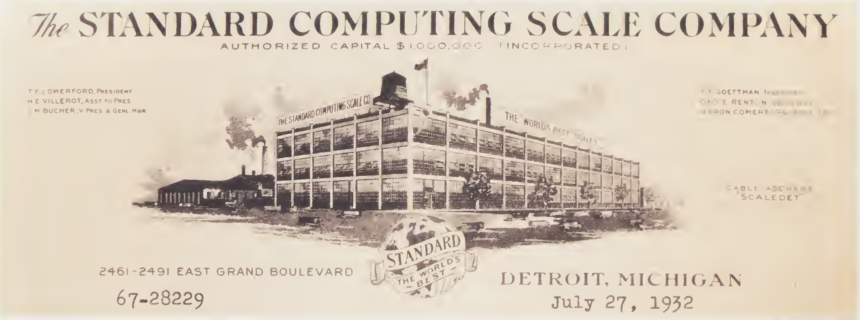


Premier Computing Scale about 1908. Invented by Louis Jaenichen



Magnifying lens for barrel top computing scale.

in the above picture from The Detroit Journal dated March 21, 1913, Comerford spent quite a bit of his leisure hours fishing. According to the accompanying poem, aside from being a hard worker, he had a foible for chorus stars. As one of the contemporaries, Clarence Burton continued describing his virtues: *Mr. Comerford is a republican in his political views, as he has held some local offices, serving as a member of the Detroit board of education from 1889 until 1891, while in 1913 he became a member of the Board of Water Commissioners, occupying that position for two years. During the World War he was chairman of Draft Board, Local No. 18, in Detroit. ... he belongs to the Detroit Athletic Club and the Riverview Golf Club. His purposes have ever been well defined, his enterprise is unfaltering and each year has chronicled his advance from the position which he occupied the previous year.* At age 77, Comerford died at the St Mary's Hospital following a heart attack on Sunday morning, July 10, 1938. He certainly groomed his stepson, Charles, as one of the future leaders. Climbing the ladder slowly, Charles held the position of a Purchasing Agent at Standard around 1932 and, after his father's death, moved to the position of Secretary. At this point, Joseph M. Bucher, the original secretary and manager from day one, took the helm as president in a very difficult time, the dawn of World War II. Unfortunately Bucher died only four years later on October 3, 1942, at age 65. It seems that George E. Renton was the next president, but the documentation during the wartime was unfortunately sparse. "We had bigger fish to fry then," as Comerford would have said.


THE STANDARD COMPUTING SCALE CO
THE WORLDS BEST SCALES
STANDARD
THE WORLDS BEST

The STANDARD COMPUTING SCALE COMPANY
AUTHORIZED CAPITAL $1,000,000 (INCORPORATED)

T F COMERFORD, PRESIDENT
H E VILLEROT, ASST TO PRES
J M BUCHER, V PRES & GENL MGR

F F GOETTMAN [illegible]
E RENTON [illegible]
[illegible]RON COMERF[illegible]

CABLE ADDRESS
"SCALEDET"

2461-2491 EAST GRAND BOULEVARD
DETROIT, MICHIGAN

67-28229
July 27, 1932

Standards' new plant in 1927

The company changed location when they moved from 654 Beaubien to Standard's new facility on 2461 E. Grand Boulevard. The Detroit Free Press published on September 15, 1927, a summarizing article of the achievements: *In the manufacture of computing scales Detroit has, for many years, held a leading place through the product of the Standard Computing Scale Company, now housed in its half-million dollar plant located on East Grand Boulevard at Dubois Street. This company was one of the pioneers in the production of computing scales, and has kept pace with progress in that and other lines until today it markets one of the best known lines of computing scales and industrial scales made in America. From a modest beginning in 1899 it has grown to its present proportions, having agencies in every State in the Union, a large selling force, with a large market for its product in South Africa, Australia, New Zealand, Canada and the United States. Many features of this company's product are covered by patents so that the production has a reputation for quality not equaled by that of any other company in the same field. The growth of the company has been constant and employment has been continuous throughout the period since its organization, and at this time*

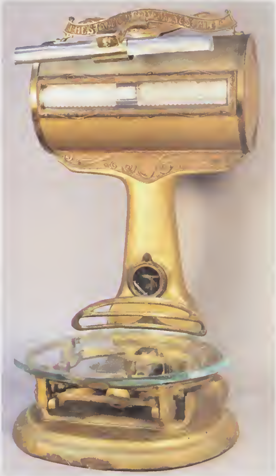
Quality Control in new plant in 1927

is doing a larger business than in any other similar period in its history. Standard was a sizable company. The 1927 Thomas' Register gives an AAAA rating, implying a capital over $1 Million. So the half a million dollars in 1927 is now worth $5.8 million—quite an investment.

Over the years the company sold their scales under brand names like Premier and Twentieth Century. It advertised in the 1932-33 Detroit City Directory "scales for grocers & butchers, porcelain, gold bronze or white enamel, portable & dormant industrial dial scales, parcel post & counting scales also porcelain person weighing scales." The Book of Detroiters from 1914 adds another surprise with the statement: "Francis C. Osborn … invented and put on the market the O.K. Computing Cheese Cutter, now made and marketed by the Standard Computing Co." The range of their products, by considering name identity, comprised very likely also the Twentieth Century Wagon Scale. The company's advertisement in the form of little brochures was quite aggressive, spending whole pages on product comparisons with their competitors. On the last pages under several "Remarks by the Men Behind the Counter," customer F. L. Stokes, from 1722 E 18th St., Kansas City, writes on Dec. 1, 1914: *In reply to your inquiry regarding my opinion of your Twentieth Century Computing scale, beg to state that it gives me great pleasure to advise you that I have used several different makes of computing scales, including Dayton, Toledo and others, and I can safely say the Standard far surpasses them all, and is surely what you call the 'Gem of the World' in mechanical weighing devices,* and he goes on. The advertising certainly convinced people to buy a Standard, the Rolls Royce of the computing scales.

As a last comment, it needs to be mentioned that Standard, "a Food Equipment Company," had all along an important product line of coffee mills and meat choppers, which you can still see now and then in stores. As a little sidebar, because of a similarity in names, today's Standard Scale and Supply Company of Detroit, a calibration and repair service, now and then gets requests for a meat or coffee grinder gear, mostly from more southern countries like Argentina, and they can help. You see the Standard products are still alive and kicking, sorry, grinding in this case. By the way, we use our Standard from 1911 regularly for weighing mail because it's our most accurate scale.

The summary index card for the Annual Reports from the State Archives reads: "Standard Computing Scale Co. Ltd formed in 1899; filed for incorporation in 1903; 150,000 shares authorized for $150,000.00; 1916 reorganized Standard Computing Scale Company; Apr 8, 1919 set term for existence for 30 years; 1949 extended term of existence for 30 years; …" And then what?



Standard Computing Scale Co. 1911. Collection of Detroit Historical Museum

Everyone is interested in the end of the story: What happened to the **Standard Computing Scale Company of Detroit Michigan, a Corporation of Michigan**? The result is more than astonishing. In 1949 the company relocated to 333 Larson St., La Port, Indiana, with a new name, **Standard Computing Scale Company**. The seat of the corporation remained in Detroit until it was dissolved, effective Dec. 30, 1958. To confuse the issue, a subsidiary of **Berkel**, the U.S. Slicing Machine Co., with its facilities in La Port, was the new owner. In 1993, the Berkel company was acquired by **GEC** and combined with **Avery** to form **Avery Berkel**. But you guessed right, an even bigger fish came in 2000, **Weigh-Tronix, Inc.**, and swallowed them. Together with an earlier acquisition, **Salter**, a scale manufacturer conglomerate was born, **Avery Weigh-Tronix**. The corporate offices are in Birmingham, England. Do you realize Standard moved up to place number one in the alphabet for scale manufacturers? It is part of the best; the partnership is outstanding. No wonder that the company as a global player can claim to be "Worldwide Leader and Technology Innovator." So Michigan, in the long line of ancestors, has the right to be proud and, as always with your kids or even worse with great-grand kids, you automatically pose the question: **what's next?** For now just take a peak into the accomplishments, products and history on the beautiful company homepage www.wtxweb.com.

MI Scales *shaped* Case Law

BY WILLIAM LAWRENCE

The following is a review of selected court cases from Michigan scale companies. The cases were gathered by Greg Moss using the Westlaw online legal research service. The intention of this article is simply to provide non-lawyers with a basic understanding of some of the important weighing scale cases from a critical time period in the history of weighing scales law. This review has been kept very simple and brief. When possible, I tried to avoid using any legal jargon. Obviously, most of these cases could have an entire in-depth article written on each one of them.

About half of these cases involve patent infringement matters and are relatively important to the development of scale patent law. The others, concerning marketing issues, are not part of this article. But before I begin the review, it is necessary to note that there are essentially three levels of courts within the United States legal system. Understanding this structure will assist you as you read the case summaries that follow.

Level 1: Local level- This is where the trials are heard. The courts are often labeled "circuit court" or "district court."

Level 2: Appellate level - This is where local level cases can be reviewed on appeal.

Level 3: Supreme Court level - This is where appeals court decisions are reviewed. The decision of the Supreme Court is final.

Stimpson Computing Scale Co. v. W. F. Stimpson Co., 104 F. 893, 44 C.C.A. 241 (1900)
This case occurred at the appellate court level (level #2).

[The basis of this case is that the Stimpson Computing Scale Company ended an agreement with Walter F. Stimpson for use of patents. However, the Computing Scale Company continued to use the Stimpson name; so there were suits and countersuits. The important historical impact of this case is in the article "What Happened to Walter?" – G. Moss]

The lower court (level #1) granted the countersuit thereby forbidding StimpCo from using the name. StimpCo appealed the decision. The appellate court agreed saying that StimpCo could develop and market its products but that they could not use the name "Stimpson Computing Scale." It stated that a company does not have a right, as against the patentee or a subsequent licensee, to use the name of the patentee, in connection with its goods subsequently manufactured, in such way as to lead the public to understand that they are still made under his patent.

Toledo Scale Co. v. Barnes Scale Co., 18 F.2d 965 (1927)
This case occurred at the district court level (level #1).

This case involves the Toledo Scale Company suing the Barnes Scale Company claiming patent infringement.

The claim is for a check system, which keeps the platform horizontal, thus allowing accurate weighing even with placement of a load near edge of platform. Barnes defends itself saying that Toledo had not used or developed the invention since the patent was issued nine years earlier. Despite being a large company that was fully able to commercialize, Toledo had not taken any steps to develop the invention. In fact, Toledo had built only one model of the invention and that was for this case.

The court ruled that the evidence showed that the product developed and marketed by the Barnes Scale Company was put on the market in 1919 or 1920 with no knowledge whatever of Toledo's invention, and in perfect good faith. Therefore, Toledo's complaint was dismissed.

Computing Scale Co. v. Standard Computing Scale Co., 118 F. 965, 55 C.C.A. 459 (1902)
This case occurred at the appellate court level (level #2).

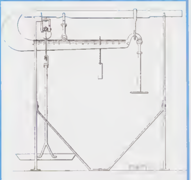
Computing Scale Company, of Dayton, Ohio, (CSC) sued Standard Computing Scale Company (SCSC) of Detroit, claiming that CSC used the words "computing" and "standard" as trade-names and that SCSC should not have been allowed to use either of those words in its company or product names. CSC claimed SCSC was attempting to mislead and deceive the public by using those words.

The trial court (level #1) ruled that the words were "descriptive" and not trade-names. The court said that no particular company can claim these words for its own to the exclusion of other makers of whose scales it is equally descriptive. The court also found that there was no intent to deceive by SCSC. The appellate court (level #2) affirmed this lower court decision.

THE ROOTS OF COMPUTING SCALES

BY GREG MOSS

This 1902 case of Computing Scale Co. v. Standard Computing Scale Co.also provides a historical summary that challenges a portion of the IBM archives! The IBM archives state that the **Computing Scale Company**, Dayton, Ohio, was the world's first computing scale company. And, thanks to the Internet, this claim is repeated on many websites. But it's wrong! It's actually the third!



Flint Patent No. 6194 of 1849

From the case: "Julius E. Pitrat…made the [computing] scale from 1885 to about 1889, when he sold out to a company or corporation which carried on the business under the name of the Detroit **Computing Scale Company**. This company failed, and its assets passed into the hands of a firm who carried on the business for a time as **Canby & Ozias**, and finally sold their rights to the present corporation, who are incorporated as the **Computing Scale Company** [Dayton]. Now, Pitrat himself used a name plate on each scale made by him, which…was as follows: 'Pitrat Computing Scale. Patented March 31, 1885, and June 6, 1886, Gallipolis, Ohio.' Pitrat's business card is also in evidence, and reads as follows: '**The Pitrat Computing Scale Co**., Manufacturers of the Celebrated Pitrat Scales, Gallipolis, Ohio.'"

And, in another case, Hull v. Pitrat et al, Jan. 24, 1891, it affirms that Hull, on behalf of the Detroit Computing Scale Company, had purchased legal ownership of Pitrat's patents. This case also documents: "The first patent granted for scales of this kind shown in the record was one to Tilly and Warren Flint, issued March 20, 1849." [Circuit Court, S.D. Ohio, Western Division. 45 F. 94, 6 Ohio F. Dec. 712]

Computing Scale Co. v. Standard Computing Scale Co., 195 F. 508, 115 C.C.A. 418 (1912).
This case occurred at the appellate court level (level #2).

The Computing Scale Company, of Dayton, Ohio, (CSC) sued Standard Computing Scale Company (SCSC) for patent infringement on Patent No. 728,577. SCSC claimed that CSC's patent was unworkable at the time the application for the patent was filed. SCSC claimed that CSC had no evidence to indicate that its patent was operable. The trial court (level #1) found in favor of SCSC. The court said that three things would be necessary for an incomplete product to be patentable:

1- Absent features are readily available by a mechanic familiar with the subject and without requiring further invention.

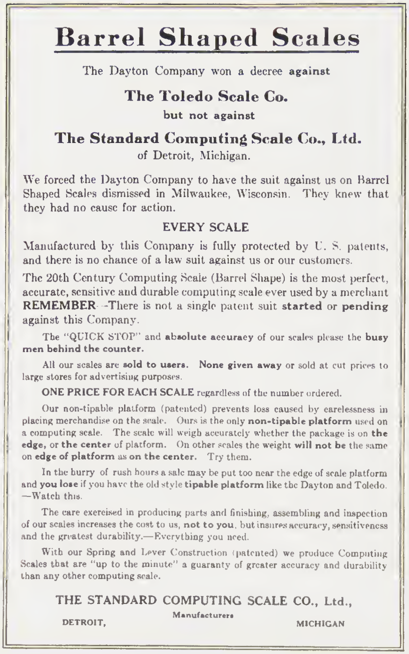
2- The mechanical questions unsolved by the patent's drawings did not require further invention to bring them into effect.

3- Imperfections within the sketches were remediable by the exercise a mechanic's technological knowledge.

The trial court (level #1) ruled that CSC's patent did not pass these tests and therefore SCSC's product was not in violation of a patent because the patent was illegitimate. The appellate court affirmed the trial court's decision.

Standard Computing Scale Co. v. Detroit Automatic Scale Co., 265 F. 281 (1920).
This case occurred at the appellate court level (level #2).

Standard Computing Scale Company (SCSC) sued Detroit Automatic Scale Company (DASC) for patent infringement on the barrel design (see ad on the next page). The trial court (level #1) ruled that DASC did not infringe on SCSC's rights under its patents. The court stated that though there was oral evidence in support of SCSC's claim, the "judgment of the eye" is more important and it clearly shows that there are substantial distinctions between DASC's product and SCSC's patent. The appellate court affirmed the lower court's decision and that's why Standard stresses this issue in their advertising.



Barrel Shaped Scales

The Dayton Company won a decree **against**

The Toledo Scale Co.

but not against

The Standard Computing Scale Co., Ltd.
of Detroit, Michigan.

We forced the Dayton Company to have the suit against us on Barrel Shaped Scales dismissed in Milwaukee, Wisconsin. They knew that they had no cause for action.

EVERY SCALE

Manufactured by this Company is fully protected by U. S. patents, and there is no chance of a law suit against us or our customers.

The 20th Century Computing Scale (Barrel Shape) is the most perfect, accurate, sensitive and durable computing scale ever used by a merchant **REMEMBER**—There is not a single patent suit **started** or **pending** against this Company.

The "QUICK STOP" and **absolute accuracy** of our scales please the **busy men behind the counter.**

All our scales are **sold to users. None given away** or sold at cut prices to large stores for advertising purposes.

ONE PRICE FOR EACH SCALE regardless of the number ordered.

Our non-tipable platform (patented) prevents loss caused by carelessness in placing merchandise on the scale. Ours is the only **non-tipable platform** used on a computing scale. The scale will weigh accurately whether the package is on **the edge,** or **the center** of platform. On other scales the weight **will not be** the same on **edge of platform** as **on the center.** Try them.

In the hurry of rush hours a sale may be put too near the edge of scale platform and **you lose** if you have the old style **tipable platform** like the Dayton and Toledo. —Watch this.

The care exercised in producing parts and finishing, assembling and inspection of our scales increases the cost to us, **not to you**, but insures accuracy, sensitiveness and the greatest durability.—Everything you need.

With our Spring and Lever Construction (patented) we produce Computing Scales that are "up to the minute" a guaranty of greater accuracy and durability than any other computing scale.

THE STANDARD COMPUTING SCALE CO., Ltd.,
Manufacturers
DETROIT, MICHIGAN

Sales Catalog Standard Computing Scale Co. about 1915

The Perfection Egg Grader

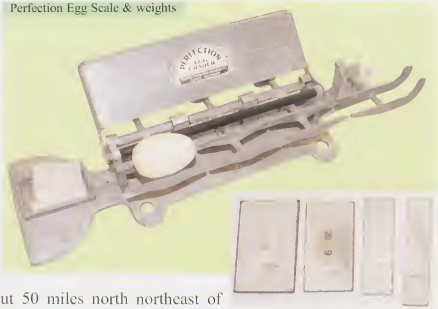
BY CHARLEY AMSBAUGH

The Perfection Egg Grader is the only egg grader or egg scale known to have been made in Michigan. It was invented by Thomas J. Aubron of Royal Oak, Michigan, who applied for a patent on May 8, 1935. It was first announced by the Perfection Egg Grader Company of Royal Oak, Michigan, in the May 1935 edition of Everybodys Poultry Magazine with a selling price of $12.50.

Patent No. 2,112,324 was issued to Aubron for the Perfection Egg Grader on March 29, 1938. The "Perfection Egg Grader" is clearly identified in the top part of the label, as shown here. The patent number is included on the label between the words "Perfection" and "Egg." The words "Perfection Egg Grader Co."and

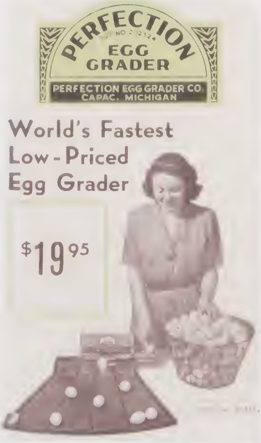
Gutzwiller's Plant in the basement of this house.

the location of the company appear in gray letters on a black background in the bottom part of the label.


Perfection Egg Scale & weights

The Perfection Egg Grader, which is made almost entirely of aluminum, was assembled by the Perfection Egg Scale Company in Royal Oak from parts made by other companies in Royal Oak or nearby Detroit. According to the Hatchery and Feed Merchandising Directory, the Perfection Egg Grader Company was located in the Washington Square Building in Royal Oak. On June 25, 1949, Aubron sold the Perfection Egg Grader patent and business to John and Lucille Gutzwiller of Capac, Michigan, about 50 miles north northeast of Royal Oak. The Gutzwillers ran their new family business from their home at 117 North Main Street in Capac, assembling, packing and shipping the egg graders from their basement to customers all over the United States and probably nearby Canada. Although the label on Perfection Egg Graders produced by Aubron reflected Royal Oak on the label, the Gutzwillers' egg graders proudly proclaimed Capac, Michigan, as the company location.

One of the Gutzwillers' daughters, Shirley Phebus, remembers that she and her sisters earned a little spending money by putting the four rectangular-shaped calibrating weights in small envelopes for shipping with each grader. Don Kaufmann, who was married to the oldest Gutzwiller daughter, Anne, remembers helping put the egg graders together on occasion. Another daughter, Patricia Miller, posed with one of the egg graders for a picture to be used in an advertising brochure. As you can see from the brochure below on the left, the Perfection Egg Grader was marketed with a soft rubber tray molded into four sections to gently catch the eggs as they roll off the grader. Although these rubber trays are still soft and pliable, they are extremely hard to come by any more.



Ad for Perfection Egg Grader 1950s

Shirley recently found some documentation showing that her parents had contracted with the Dynamics Die Casting Company and other suppliers in the Detroit area to make the components for the Perfection Egg Grader. It is fair to assume that these were the same suppliers that Aubron had used when he owned the business. Shirley also discovered that her parents sold the egg grader business to the Kuhl Corporation of Flemington, New Jersey, in 1961. It is interesting to note that the Kuhl Poultry Equipment Company's 1959 catalog included an ad, for what was obviously a Perfection Egg Grader, but which they referred to as the Kuhl Automatic Egg Grader. Although it was not unusual for poultry equipment companies to include other company's products in their catalogs under their own name, this ad shows Kuhl's interest in the Perfection Egg Grader some two years before the sale was completed.

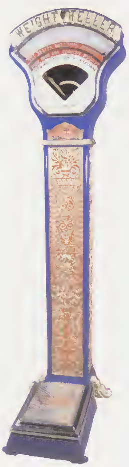
Acknowledgements: Special thanks to Daniel Bell, the curator of the Capac Community Historical Society Museum and Shirley Phebus for her first-hand recollections of the family business and for searching through her parents' paperwork to find documentation on the transfer of ownership of the Perfection Egg Grader Co. and the name of the company that supplied the parts for their business.

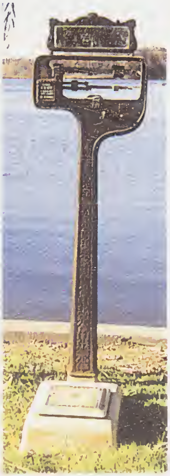
Michigan Coin Operated Scales

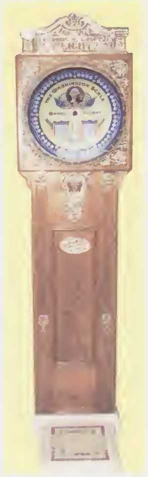
BY BILL BERNING

There were at least sixteen Michiganders who held patents for coin operated scales between the years 1902 and 1935. Many of those scales were manufactured by the three companies who are known to have actively produced coin operated scales in the state.

Among the largest national producers of coin-op scales was the Caille Brothers Company of Detroit. They initially produced trade stimulators, slot machines, phonographs, and peep show machines. They started production of coin-op scales in 1905 with their Cadillac scales. These were tall cast iron "fan head" scales with ornate posts. Later they added their coin-op beam scales and the Washington scale, one of the most beautiful and sought-after coin-op scales ever produced.


This fan head Caille scale was based on a 1915 patent assigned to Caille by Vanderziel and Goodall. Photo: www.vcaauctions.com

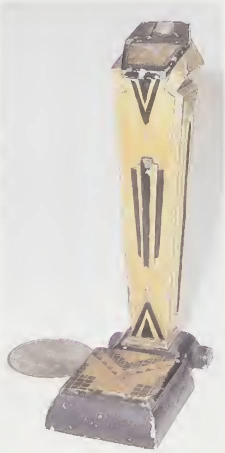

Caille's beam scale based on a patent of 1914 can be found in porcelain enameled iron, steel and this ornate cast iron version.

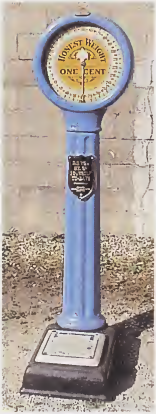

Caille's Washington scale has a wooden cabinet with chrome plated brass adornments.

Caille also manufactured the Aristocrat, Aristocrat Deluxe, and Aristocrat Junior which were operated throughout the US by Peerless of Detroit and in Canada by Canadian Rhodes Mfg. Ltd. of Toronto. These lollipop scales, so named due to their round heads and slender posts, were produced in great numbers and were made of porcelain enameled cast iron. The Aristocrat Deluxe with visible works was produced in white, blue, red and green and the scales were so sensitive that the user could watch the needle move with every heart beat. The springs on these scales were covered in order to make the scales appear to be of the non-spring or pendulum type in order to compete with other coin-op scales which touted "No Springs, Honest Weight." During this period Caille also produced, in great numbers, the Peerless ticket scales. These scales would print the user's weight and the date on a small card bearing a picture of a movie star and a fortune.

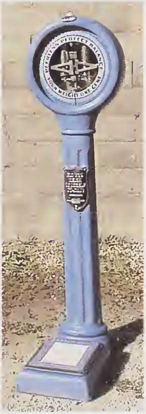
Barnes also had a lollipop scale assigned to them by patentee B. W. King of Detroit but as far as I know it was never produced.

The popularity of the large coin-op scales gave way in the late 1920s to the smaller Art Deco styled personal scales. Caille also had a very eye-catching "Moderne" design for these and produced them in black and white with a striking tile design on the step plate. The salesman's sample of this scale is extremely rare as is the marquee shown in the example accompaning this article.

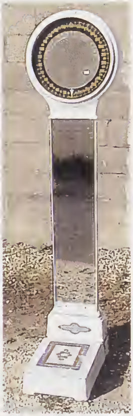

Many of the full-size coin-operated scales were made from cast iron and thus were impossible for salesmen to carry with them on their route. Caille had samples made, like this rare 5⅝" copy of their Moderne scale.



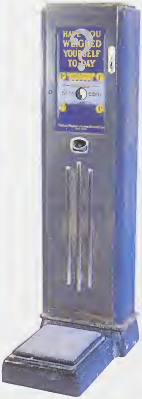
Caille Aristocrat



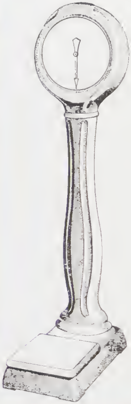
Caille Aristocrat Deluxe



Caille Aristocrat Junior

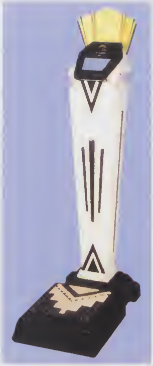


Caille Ticket Scale

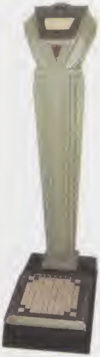


King's patent for Barnes.

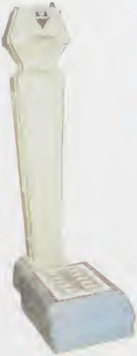
Barnes and Standard Computing Scale Co. also produced Deco styled personal scales. Barnes' scales were shaped like a woman's torso with a tight fitting dress and were operated by National Vending Machine Corporation (NAVCO) and Peerless of Detroit and were enameled in green or white with a distinctive tiled step plate. Detroit Computing Scale Co. produced a taller personal scale of cast iron enameled in white or green porcelain.



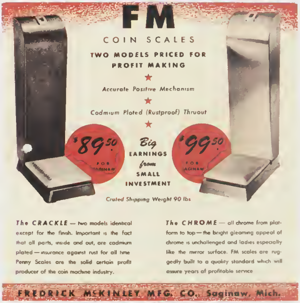
Caille Moderne



Barnes NAVCO



Standard Computing Scale



FM

COIN SCALES

TWO MODELS PRICED FOR PROFIT MAKING

★

Accurate Positive Mechanism

★

Cadmium Plated (Rustproof) Thruout

★

89^{50} FOB SAGINAW

Big **EARNINGS** *from* **SMALL INVESTMENT**

99^{50} FOB SAGINAW

Crated Shipping Weight 90 lbs

The CRACKLE — two models identical except for the finish. Important is the fact that all parts, inside and out, are cadmium plated — insurance against rust for all time Penny Scales are the solid certain profit producer of the coin machine industry.

The CHROME — all chrome from platform to top — the bright gleaming appeal of chrome is unchallenged and ladies especially like the mirror surface. FM scales are ruggedly built to a quality standard which will assure years of profitable service

FREDRICK McKINLEY MFG. CO., Saginaw, Mich.

1948 Flier advertising Fredrick McKinley Mfg. scales.

In a 1948 advertisement, two models of new coin scales were introduced by Fredrick McKinley Manufacturing Co. of Saginaw, Michigan, but it is unknown if any were produced.

Michigan was an important producer of coin-operated scales many of which are still working today. Among these scales are some of the most collectable and desirable scales in existence.

150 Years and Still Weighing

BY UTZ SCHMIDT

It is amazing! The footprints of our Michigan scale makers can be followed right from the beginning with the invention of an Automatic Grain Meter on April 10, 1860, up into the present time. Yes, for the surviving companies, ownership, names and also the locations changed more than once, but their blood still pulses, only now in larger entities. In the previous articles for the "Big Ones" in scales, you can read about their fairy tale endings: "And they lived happily ever after."

Would you have guessed that over the years there have been at least 42 scale companies in Michigan, several of them quite sizeable as indicated in the Thomas' Register? In a few instances there are identical names at different time frames because the owners changed and possibly also the character of the business, for example, selling instead of manufacturing. A complete listing can be found on the last page, but some of them deserve a few more words.

BARNES SCALE COMPANY

This was certainly a close-knit family that ran this company. See how often the name **Barnes** appears in the following article, published by Clarence M. Burton in 1930. Guess who handled the patent affairs of the company, it was no one else but **Stuart C. Barnes**, what a coincidence, and there is also a **Barnes, Emma I.** as a witness on patent documents.

Barnes scale late 1930s. Made in Windsor, Ontario.

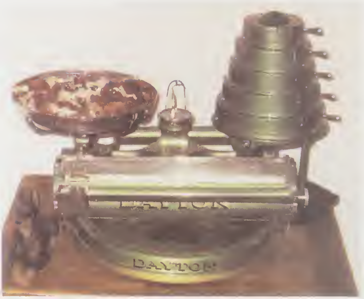
The Barnes Scale Company of Detroit was organized in 1920 with ***Mell Barnes*** *as president,* ***Walton J. Barnes*** *as vice president (he learned the ropes at the Detroit Scale Manufacturing Co., shown as a co-inventor in 1915) and* ***Thomas W. Barnes*** *as secretary and treasurer. They began the manufacture of counter and computing scale [at some point, also coin operated weighing scales] and in the beginning the business, located on Grand boulevard, was a small one, employing only three or four men, but the trade grew until it justified the purchase of an old creamery building at 6521 John R Street, near East Grand Boulevard and Woodward Avenue. There they erected a new plant, a two-story modern mill construction building, 60x100 feet, with excellent lighting and a modern ventilating system. Even this was not adequate to their growing trade and in 1925 they built a large addition, furnishing ample office space on the second floor and giving room for the installation of the latest types of machinery in the factory. They are now employing forty highly skilled mechanics and the work measures up to the most advanced standards in this field.*

The business has become international in scope, for they make large sales in Australia, New Zealand, South Africa and Canada. They maintain a sales organization of one hundred and fifty men and also a dealers' organization and they operate a branch establishment at Windsor, Ontario. Their output is a complete line of counter and computing scales and the excellence of their product insures a continued patronage.

The first president, Mell Barnes, died in 1924, at which time his son, Walton J. Barnes, was made president and manager. The latter's uncle, Thomas W. Barnes, died in 1926 and ***Harry W. Barnes****, son of Mell Barnes, is now vice president and treasurer, with C. H. Simms as secretary. The officers are alert and enterprising business men whose capable methods are manifest in the growing success of the business.* The product range included, as we know from patents, also slicing machines and knife sharpener devices. We can hear about the company's World War II time following the attack of Pearl Harbor through the WJR interview series, "Man on The Street." The employee, Bill O'Melia, a scale painter for 45 years, reports on the good old days and the change of the plants to defense work. In the midst of all this, C. H. Simms took the presidency in 1946 and held the position until the company's dissolution on June 25, 1949.

F. C. OSBORN COMPANY of DETROIT, MICHIGAN

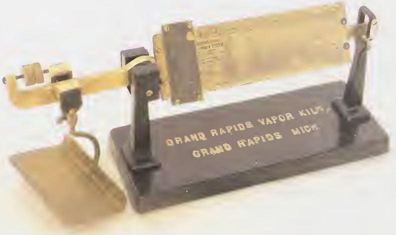
Please read, in case you didn't, the passage about Francis C. Osborn in "The Founders of Detroit's Scale Industry." As an interesting sideline in the 1910 census, Francis is listed as the president and his wife Laura as secretary and treasurer, in a company for the "Manufacturing of Machinery." But, after all this was not the only product, because according to the Gazetteer, the company also made "Scales for Family Use" between 1883 and 1932. The early date might reference to the Osborn Cash Register Co. in Detroit. It is also not clear if he produced his invention, the beehive scale, because those scales we found clearly have connections to Stimpson through Walter's patents for the swivel base. The path of Francis' scales is, after all, very confusing.



Patents of Osborn's beehive and Stimpson's swivel base in scale from Dayton.

GRAND RAPIDS VENEER WORKS

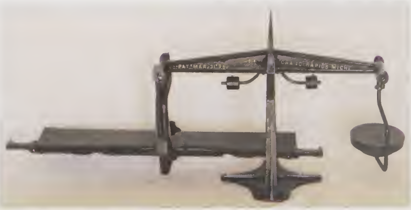
In order to dry wood to the proper moisture content for the production of veneer, Thomas D. Perry of Grand Rapids invented the scale shown in the photograph and assigned his patent of March 5, 1918, to the company. It was actually built by the Buffalo Scale Company and sold exclusively by the Grand Rapids Vapor Kiln, a part of the veneer works. So it was outsourced, but it still remains a Michigan product.



Grand Rapids moisture tester around 1918

MACHINERY COMPANY of AMERICA

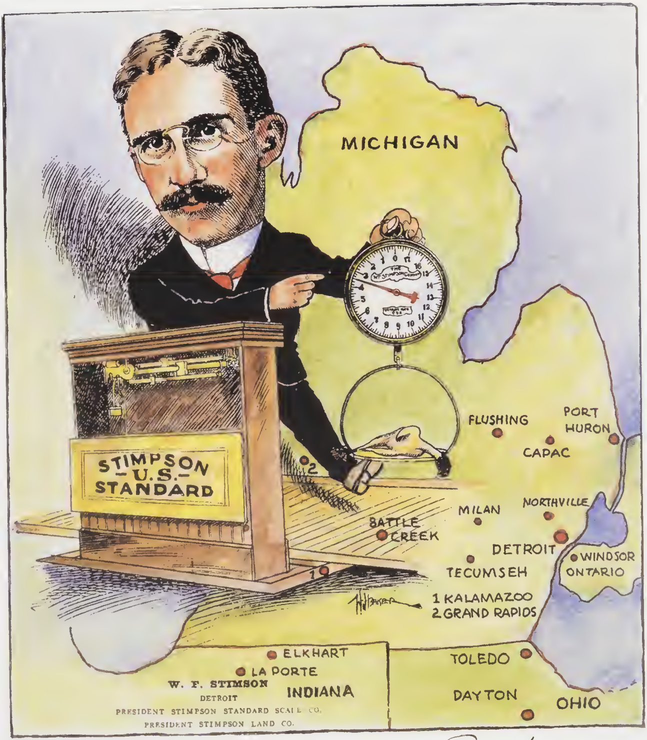
This was, as the above manufacturer, a specialty company, catering as a local supplier to America's furniture industry once blossoming in Grand Rapids. Greg dug again, finding catalogs from Baldwin Tuthill & Bolton for the years 1904 to 1910. They are in the public library, not far from the marvelous Van Andel Museum Center with magnificent displays of furniture, production equipment, and the involved people. The Munson Proportional Balancing Scale, named after its inventor, see patent 557,140, March 31, 1896, is used to keep the multiple knife blades for rotary wood working equipment equal in weight during the sharpening process.



Munson Balance for knives around 1904.

Scale Makers in Michigan: 1879-1958

Company Name	Michigan Locations	Years	Assigned MI Patents	Scale Type / Brand & Model
American Harrow Company	Detroit	1883 - 1932		hand truck
Advanced Thresher Co.	Battle Creek	1905 - 1906		grain
Atlas	Southeast Mich.	1908 - 1913		platform / Atlas Wagon Scale w/o pit
Baker Perkins Co, Inc	Saginaw	1939		grain
Barnes Scale Company	Detroit	1920 - 1949	12	computing, coin ops, counting, counter
Barker Automatic Scale Co.	Nashville	1890 - 1891		
Caille Brothers Company	Detroit	1902 - 1950s	4	coin ops / Aristocrat & Aristocrat Deluxe, Moderne, The Washington (also: slot machines, outboard motors)
Canuelle	Detroit	1883 - 1932		
Detroit Computing Scale Co.	Detroit	1888 - 1891		computing
F C Osborn Company of Detroit	Detroit	1901 - 1932	1 + 9 by owner	computing, weight collecting, family
Fredrick McKinley Mfg. Co	Saginaw	1948		coin ops / FM Coin Scales; Crackle, Chrome
Grand Rapids Brass Works	Grand Rapids	1885 - 1907		postal / Tower
Grand Rapids Scale Works	Grand Rapids	1895 - 1908		platform, wagon
Grand Rapids Veneer Works	Grand Rapids	1918	1	lumber moisture tester
Hartman F & Co	Grand Rapids	1883 - 1932		platform / Kelly Improved Farm Scale
Henry C Hart Mfg. Co.	Detroit	1879 - 1891	1 + 1 by owner	computing / Carters Standard
Hill Grain Scale Co.	Detroit	1885 - 1886		grain
J B Dutton Mnfg. Co, The	Detroit	1883 - 1932	1	grain
James Larkin	Detroit	1883 - 1932		custom ?
Maasstrone Manufacturing Co.	Battle Creek	1929 - 1932		postal / Handy Postal Scales
Michigan Automatic Weighing Machine Co.	Detroit	1883 - 1932		grain
Machinery Co. of America	Big Rapids	1896 - 1910		blade balance / Munson Proportional Balance
Michigan Scale Co	Kalamazoo	1879 - 1906		hanging sack, bulk
Milburn Scale Company	Detroit	1883 - 1932	4 by owner	computing (duplex beam)
New Century	Southeast Mich.	1908 - 1913		wagon / New Century Wagon Scale w/o pit (duplex or double beam)
Nichols & Shephard Co.	Battle Creek	1905 - 1906	1	grain
Osborn FJ Co., The	Detroit	1900s	1	computing
Perfection Egg Grader Co	Capac	1939 - 1953	1	egg grader
Standard Computing Scale Co. of Detroit MI - "The World's Best Scales"	Detroit	1889 - 1949	67	computing, counting, hand truck, wagon, industrial / Premier, 20th Century; coin ops / Detroit
Standard Computing Scale Co.	Detroit	1949 - 1958		computing, counting
The Stimpson Weighs		1894 - 1926	Stimpson, Walter F., as MI resident, owned 46 scale patents	
Stimpson Computing Scale Co. Ltd	Milan	1894		computing
Stimpson Computing Scale Co.	Tecumseh	1895 - 1896		computing
Stimpson WF & Co.	Detroit	1899		
W F Stimpson Company	Detroit	1900 - 1914		computing
Stimpson Standard Scale Co.	Milan	1902 - 1904		wagon, portable platform, truck
Stimpson Computing Scale Co.	Detroit	1904 - 1912		**sales only**
Stimpson Scale & Mfg. Co.	Milan	1905 - 1906	1	wagon, portable platform, truck
Stimpson Scale & Mfg. Co.	Northville	1906 - 1911	3	computing ?, wagon
Stimpson Scale & Electric Co	Northville	1911 - 1926	1	computing ?, wagon
Detroit Automatic Scale Co.	Detroit	1912 - 1921	3	**sales only**
Detroit Scale Mfg. Company	Detroit	1914 - 1921	2	computing

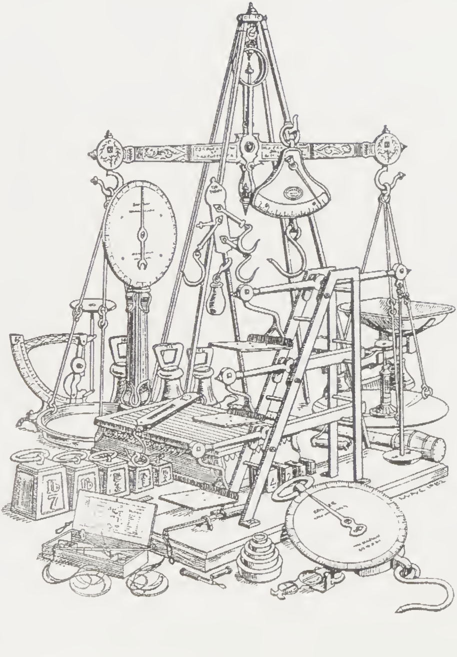

MICHIGAN
THE W.F. STIMPSON COMPANY
STIMPSON -U.S.- STANDARD
FLUSHING
PORT HURON
CAPAC
MILAN
NORTHVILLE
BATTLE CREEK
DETROIT
WINDSOR ONTARIO
TECUMSEH
1 KALAMAZOO
2 GRAND RAPIDS
ELKHART
LA PORTE
INDIANA
TOLEDO
DAYTON
OHIO
W. F. STIMSON
DETROIT
PRESIDENT STIMPSON STANDARD SCALE CO.
PRESIDENT STIMPSON LAND CO.

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

MAY 17 - 21, 2007 CONVENTION ISSUE DEARBORN, MI



ISASC CONVENTION SITES

1979	San Francisco, CA
1980	London, England
1980	New York City, NY
1981	Delft, The Netherlands
1983	Sindelfingen, West Germany
1984	Chicago, IL
1986	Washington, DC
1986	Paris, France
1987	Anaheim, CA
1988	Boston, MA
1989	San Francisco, CA
1990	Philadelphia, PA
1991	Chicago, IL
1992	San Diego, CA
1993	Baltimore, MD
1994	San Francisco, CA
1995	Hershey, PA
1996	New Orleans, LA
1997	Los Angeles, CA
1998	Toronto, Canada
1999	Atlanta, GA
2000	Seattle, WA
2001	Chicago, IL
2002	Pittsburgh, PA
2003	San Antonio, TX
2004	Minneapolis, MN
2005	Washington, DC
2006	San Francisco, CA

Welcome
to the
Twenty Ninth Convention
# of the
International Society
of
Antique Scale Collectors

May 17-21, 2007
Hyatt Regency
Dearborn, MI

INTERNATIONAL SOCIETY

PRO

THURSDAY, MAY 17, 2007

2:00 P.M. - 4:30 P.M.
ARRIVAL • HOTEL CHECK-IN -CONVENTION REGISTRATION

4:55 P.M. - 8:15 P.M
TOUR & DINNER AT FAIRLANE MANOR
See shuttle schedule.

FRIDAY, MAY 18, 2007

9:00 A.M. - 4:30 P.M.
TOUR THE HENRY FORD MUSEUM, GREENFIELD VILLAGE & ROUGE PLANT
See shuttle schedule.- Lunch on your own.

4:30 P.M. - 6:00 P.M.
ON YOUR OWN
Sightseeing • Shopping • Sleep

6:30 P.M. - 'Til......
COLLECTOR'S GET-TOGETHER, OFFICIAL WELCOME,
SCALE TALK, ALBUM-SHARING, CAMARADERIE
Light meal and beverages served.
Marquis Room - 2nd Floor

SATURDAY, MAY 19, 2007

9:00 A.M. - 12 NOON
Marquis Room • 2nd Floor

Get a glimpse into the lives of the founders
of the scale industry, why they choose Michigan,
the ingenious patent that shook up the world,
the inventors, the network of companies and Surprises.

12:15 P.M.- 1:30 P.M.
LUNCHEON BUFFET
Rotunda- 16th Floor

NTIQUE SCALE COLLECTORS

RAM

2:30 P.M. - 5:30 P.M.
SILENT AUCTION
Followed by Let's Make a Deal
Coordinated by Bob Jibben and Judy Soslau
Marquis Room - 2nd Floor.

7:00 P.M. - Til...
GALA RECEPTION AND BANQUET
Marquis Room - 2nd Floor.

SUNDAY, MAY 20, 2007

9:00A.M. - 12 NOON
Marquis Room - 2nd Floor.

"SHOW AND TELL"
Jerome Katz will chair: Special treasures from our members.

BUSINESS MEETING
Officer reports, floor discussions and comments. Peter Laycock, President.

12:15 P.M. - Til...
LUNCHEON BUFFET
Rotunda - 16th Floor

Balance of day free time.

MONDAY, MAY 21, 2007

8:00 A.M. Bus Departure
10:40 AM - 12:40PM
POST CONVENTION OPTIONAL TOUR to ST. CHARLES, MI TO SEE SCALES
COLLECTED BY JIM DIETRICH
Light Refreshments

1:30 PM - 2:40 PM
LUNCH at BAVARIAN INN in FRANKENMUTH, MI

3:40 PM Departure
BUS TO HOTEL

SEE YOU NEXT YEAR IN CHATTANOOGA, TENNESSEE!

IN ATTENDANCE*

Charley	Amsbaugh	Westminister	MD
Stephen & Kathy	Barnett	Ellicott City	MD
Steve	Beare	Wilmington	DE
Ralph & Patricia	Bergmann	San Rafael	CA
Jan & Bill	Berning	Sycamore	IL
Kurt & Ann	Beyreis	Maurertown	VA
John & Betty	Cheeseman	Dorset, England	
Norman & Phyllis	Cima	Menlo Park	CA
Nancy	Diehl	Detroit	MI
& Lynda	Baker	Detroit	MI
James & ***Jack***	Dietrich	St Charles	MI
& Joyce	Glazier	St Charles	MI
Mary	Easton	Downers Grove	IL
Leslie & Elaine	Firth	Mercer	PA
Robert	Foster	Dayton	NV
Ken	Goodhue	Oroville	CA
Mike	Goodman	Townsend	VT
Stan & Jeanne	Hanssen	Fairacres	NM
Bob & Carol	Hayden	Austin	TX
Gregory & Judy	Hill	Mira Loma	CA
Harold & Becky	Illers	Cape Girardeau	MO
Irving & Rhoda	Isicoff	Ocala	FL
Arlene & Bill	Jacobson	Bayside	NY
William	James	Orinda	CA
Robert	Jibben	Minneapolis	MN
Jerome & Mary	Katz	Downington	PA
Edward	Konowitz	Cheshire	CT
& ***Andrea***	***Rosenfield***	Cheshire	CT
Charles & Helen	Lamlein	Normal	IL
Peter & Dian	Laycock	North York, Canada	
Ross & Winsome	Ledbetter	Chapel Hill	NC
Clifford & DeVee	Lushbough	Aurora	CO
Jan & Eva	Macho	LaCanada	CA
Stuart	Malter	Charlotte	NC
Jack	***Mickevich***	***Scottville***	***MI***

****Each listing indicates the member's name first.***
Names of members attending their first convention are in italics.

IN ATTENDANCE*

Jerry & Angie	***Mirman***	***Copley***	***OH***
Clem & Katharine	Monday	Oroville	CA
Greg & Bev	***Moss***	***Waterford***	***MI***
Mary Anne	Murphy	Pittsburgh	PA
Paul & Peggy	O'Neil	Sun City West	AZ
Catherine	Panagakos	Greenville	SC
Larry	Press	Jacksonville	FL
Larry	Pugsley	Three Lakes	WI
Utz & Shirley	Schmidt	Palms	MI
Les	Schneiderman	Omaha	NE
Don & Donna	Schoenly	Glen Ellen	IL
Don	Shaw	Cedar Rapids	IA
George & Fran	Sherman	El Dorado Hills	CA
Ben & Mary	Smith	Jackson	MI
Eric & Judy	Soslau	Austin	TX
James & Barbara	Tope	Mt Sterling	OH
Tom & Paula	VanNatta	Decatur	AL
Jaap	Visser	The Netherlands	
Phil	Wehman	Chattanooga	TN
Ruth	Willard	San Mateo	CA
Jerry & Eva	Wilson	Escondido	CA
John	Young	Beaumont	CA

CONVENTION NOTES

1.Bidder numbers for the Silent Auction are on the back of the name tag. Please wear tag to all events. If a seller needs additional bid sheets, contact Bob Jibben or Shirley Schmidt.
2. Be sure to bring your MEAL TICKET to each applicable meal.
3. Attire: Casual for days and evenings. Dress-up suggested for Saturday night banquet.

CONVENTION COMMITTEE

Utz & Shirley Schmidt; Greg & Bev Moss - Chair Team
Bill & Jan Berning; Jim Detrich & Joyce Glazier; Bob & Carol Hayden;
Bob Jibben; Ben & Mary Smith; Eric & Judy Soslau

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

Founded September, 1976

3616 Noakes St. • Los Angeles, CA 90023 • USA

Officers and Directors 2007

President	Peter Laycock
Vice Presidents	Kurt Beyreis
	Robert Jibben
	Jerome Katz
	Mary Anne Murphy
Secretary	Carol Hayden
Treasurer	Leslie Firth

President Emeritus	Bob Stein
Executive Secretary	Jan Macho

Number 110 **May 2007**

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

Dearborn Convention

Close to 100 enthusiastic scale collectors gathered in Dearborn to attend the 29th annual ISASC convention. Congratulations to the convention committee; Shirley & Utz Schmidt, Beverly & Greg Moss, Jan & Bill Berning, Jim Dietrich and Ben Smith, for staging another first rate convention.

The weather, the hotel, the program and the camaraderie were all outstanding. The attendees were afforded the opportunity to visit a number of local attractions including; Fairlane Manor the home of Henry Ford, The Henry Ford Museum, Greenfield Village and the Rouge Plant. The post convention tour to visit the collection of Jim Dietrich was well attended and enjoyed by all.

Regular convention events, the Friday night album sharing, the Saturday morning presentations, Show and Tell and the Annual General Meeting were all well received.

The Saturday morning presentations were sensational. Utz, Greg, Shirley and others put on a skit portraying the life and work of Walter Stimpson, Michigan's most prominent and prolific scale maker. The research developed on Michigan Scale Makers provided the basis for the theme of this convention. At the end of the Saturday morning presentations the attendees were given the 2007 Issue 2 of EQM which was totally compiled of articles on Michigan scales and scale makers.

The Silent Auction and Lets Make a Deal provided ISASC members a chance to add to their collections resulting in near record sales as 169 scales and other metrological materials were bought.

A preview of the 2008 convention to be held in Chattanooga, Tennessee was presented by convention chairman Phil Wehman. It promises to be another not to be missed event. Mark your calendars for May 15, 2008.

"Hope to See You in Chattanooga!"

Trip to the United Kingdom October 2008

At our 2006 convention it was suggested that a number of our members would be interested in a group trip to England, one which would coincide with the ISASC Europe fall meeting. At the convention in Dearborn a proposed agenda for such a trip was shared with the attendees. There was a very enthusiastic response and as a result, over the next few months, specific costs and details of such a trip will be developed. For those members who could not attend the convention who might want to be included please send me an email pegl@sympatico.ca and I will send you a copy of the proposed agenda.

Midwest Scale Collectors 2nd Annual Weigh In

The second annual "Weigh In" of the Midwest Scale Collectors group will be held August 18, 2007 at the home of Don and Donna Schoenly at 260 Montclair Avenue, Glen Ellyn, Illinois, 630 858 7595, donschoenly@yahoo.com . Everyone is welcome, it is sure to be another fun scale collecting event.

Gift to the ISASC Collection

Thanks to, Don Shaw, Charlie Amsbaugh and John Shannon for their recent contributions to the ISASC Collection. The collection continues to grow and improve with your support. The ISASC Collection is housed in Pittsburg PA and is nicely displayed at our climate controlled storage facility. The collection is maintained by the ISASC Collection Committee, Chaired by Mary Anne Murphy. Should any member wish to view the collection please contact Mary Anne and I am sure she will be more that happy to arrange for you to view it.

ISASC Rack Card

Last year, you will recall that we advised you of the availability of the "ISASC Rack Card" The primary objective of producing this card is to expand the awareness of ISASC in an effort to attract new members. In that regard, the Society again needs your help. We would like to make these cards available to scale collectors across North America through distribution in antique malls, antique shops, antique fairs and any other locations where scale collectors are likely to congregate. As a guideline we suggest 20 cards for each location. You can order additional rack cards by contacting Cora Caley at 3616 Noakes St., Los Angeles, CA, 90023, dialcora@yahoo.com .

Coming Soon

Starting with the next newsletter, on a test basis, an ***'Articles for Sale and Articles Wanted'*** section will be added to provide ISASC members an opportunity to sell or acquire scales and other scale related material. I anticipate a maximum of one page front and back. If you wish to submit articles or inquiries please send them to me at pegl@sympatico.ca. Please include a brief description, price and payment details, shipping details and contact information. The next newsletter will be mailed in August. Please submit your requests early.

In Memoriam

Sadly I report the passing of

Ed Walton a longtime member of ISASC who passed away after a long battle with cancer. Ed is survived by his wife Hannah
Oliver Sapp a longtime member of ISASC. Oliver is survived by his wife Jacqueline
Gloria Dooley, the wife of past President Tom Dooley, passed away May 13, 2007 after a long battle with cancer. Gloria is survived by her husband Tom.

All will be missed by their families and their many scale collecting friends.

Welcome To New Members

I would to take this opportunity to welcome the following new members and to encourage them to contact any of the members of ISASC should they have any questions.

Lawrence Herrera, Dallas, Texas
Ralph Lipfert, (Christine), Williamsburg, Virginia

**How to Control a Rowdy Group **

In English pubs, ale is ordered by pints and quarts... So in old England, when customers got unruly, the bartender would yell at them "Mind your pints and quarts, and settle down."

It's where we get the phrase "mind your P's and Q's"

Until next time I hope you find a few good scales.

Peter Laycock,
President ISASC

ISASC
INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

May 31, 2007

ISASC New Membership Drive

At our recent board meeting during the convention in Dearborn a discussion was held on the subject of recruiting new members to ISASC. It was pointed out that many members have joined ISASC because of the wealth of information that is available through the publications that it offers to its members. At the same time ISASC has a sizable inventory of these materials in stock. Most of our current members already have purchased the items that they need as a result sales are very low.

It was recommended that, for a limited time, we use this slow moving inventory as a tool to recruit new members, by offering these materials for sale on EBAY.

You may recall that last year we established a junior membership category for ISASC. James Reeve is our first member. He is an enthusiastic scale collector with a collection of over 250 scales. He is 18 and has just graduated from high school. James had asked if there was anything he could do to be more active in ISASC. The board has asked him to help execute a new membership drive by selling some of our excess inventory on EBAY.

The underlying objectives of this program are as follows

1. Recruit new members to ISASC
2. Reduce excess slow moving inventory of ISASC publications
3. Provide an opportunity for James to participate in ISASC

The program will work as follows. James has set up an EBAY and Paypal account. He will offer for auction ISASC material. He will handle all aspects of the sale of these items. He will submit all revenues to ISASC on a monthly basis and will be paid a commission to compensate him for his work.

With each sale that is made the winning bidder will receive; an ISASC application form, a colorful ISASC rack card, a sample of a past EQM, an invitation to visit our web site and a letter from ISASC inviting them to join.

This activity is consistent with the approach taken by most non profit organizations in the United States to raise what is referred to as "non dues income."

It is only just over a week since the board sanctioned this program. I had not anticipated it starting as soon as it has. I apologize for not having advised the membership of this program prior to its beginning.

Kindest personal regards,

Peter Laycock
President ISASC

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2007 ISSUE NO. 3

PAGES 3265 - 3292

Cover Picture

The Fly Aweigh® letter scale is a 3 ounce capacity postal scale and a mobile all in one. Shaped like a pelican in flight, it measures 7" long and has a 12½" wingspan. It comes complete with a 2 oz weight that clips in the letter clip so that your bird can fly. US patent number 5,895,893 was issued to John McMillan on April 20, 1999. Fly Aweigh® letter scales were also produced in Eagle and Great Blue Heron designs. They are available for sale at http://www.seacatch.com/flyhome.htm

To see more letter scales featuring animals see the article 'A Zoo of Letter Scales' by André Sol on pages 3274 - 3281 and the Showcase on page 3282.

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Clearance of the Postmuseum

BY REIN KOK

In EQM 2007 issue 1, I wrote something about the Dutch scale-maker Velthoen. The data of this story I found at the Museum of Communication (Postmuseum) at The Hague. This was in the year 2004. I had been there a few times to do some research on postal scales.

A few months later I was phoned by the museum. People told me they were reorganising their collection and would sell a part of it. I was asked if I was interested in some of their scales. Of course I was!! A few days later I was at the museum. About 30 scales were waiting for me. The curator told me I first could make a choice for my own collection. Among these scales were some I had never seen before and for the first time in my life I was very excited!! The rest of the scales I could bring to auction at our society.

One of the oldest scales was a pendulum scale of Berend Holsboer, a scale-maker at Arnhem (Fig. 1). This scale was produced between 1865 and 1870 and was probably used at the post-offices in Holland before 1870. Behind the brass dial swing two arms with brass counterweights. The scale has a long iron pointer. The dial is graduated from 0 - 200 grams. On the tripod is an adjustment screw. The scale has a capacity of 200 grams and is 56,5 cm tall. There is also a Holsboer-scale with a capacity of 100 grams with a fixed pointer and a movable brass dial. The scales of Holsboer are very well made.

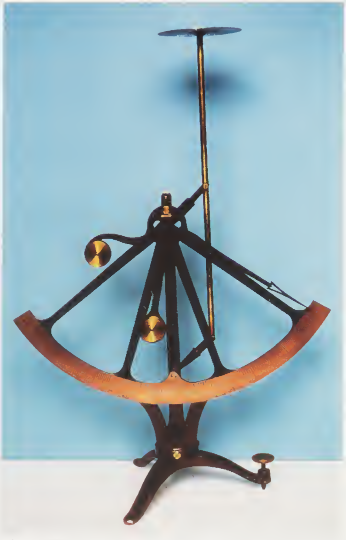


Fig. 1. ↗↗ Pendulum Scale by Berend Holsboer.

In January 1870, a circular of the Central Office of the Dutch Post was sent to the post-offices in the Netherlands with the announcement they should be provided with a letter-scale and a parcel scale. Fig. 2 shows this letter-scale. It has a capacity of 100 grams, divided by grams and it bears the name of the makers (Fig. 3). The dial and hanging pan are made of brass. The pointer and counterweight are of cast iron. In the pointer is a window with a thin thread for accurate adjustment. On the tripod underneath is an adjustment screw. The scale is 40 cm tall.

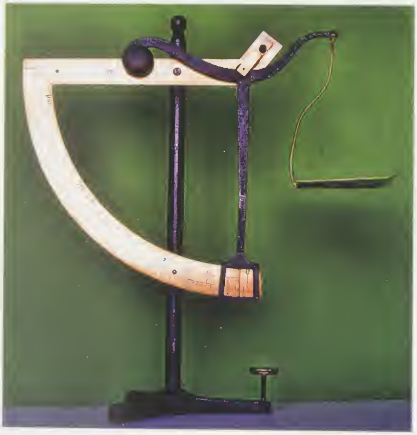


Fig. 2. ↙↙ Letter scales like this one made by Becker & Buddingh were sent to the Post Offices in The Netherlands in 1870.

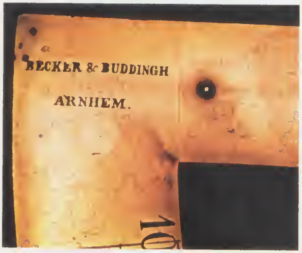
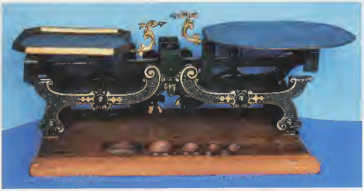


Fig. 3. ↗↗ Detail showing the name of the makers stamped on the scale.



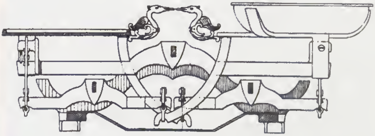


Fig. 4a & b. Becker & Buddingh of Arnhem were also the makers of the Phanzeder-Pfitzer balances supplied to the post offices in the Netherlands in 1870.

The parcel-scale is a phanzeder-pfitzer-balance with a capacity of 5 kgs. (Fig. 4a). It is a complicated scale with a series of parallel links and sub-beams, invented by Phanzeder. The name Pfitzer comes from the Pfitzer Brothers who improved the mechanism. The system is similar to Béranger's, except that the legs cross under the main fulcrum (Fig. 4b). The scale is painted green and bronze and is made of cast iron. It is screwed on to a wood base, in which are 13 holes for the weights. This balance was sent to the post-offices in 1870 with 13 brass weights from 1 kg to 1 gram. At the left-hand corner of the base is a small brass plaque with the words "Administratie der Posterijen" (Fig. 6). The 1870 circular stated that both scales were delivered by the scale-maker Becker & Buddingh of Arnhem.

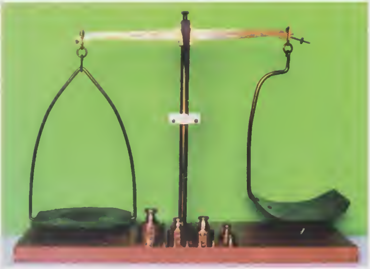


Fig. 5. This apothecary scale was used by the Dutch Administratie Der Posterijen as a letter scale.

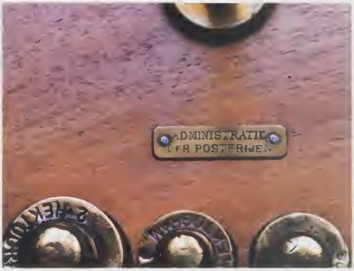


Fig. 6. A small brass plaque like this one is attached to the base of the phanzeder in Fig. 4a and behind the weights on this Becker scale.

Intermezzo

The name of Becker is well-known in the US. Christopher Becker emigrated with two of his sons in 1854 from Arnhem to the US and founded some factories. A year later his wife and two other sons followed him. You can read something about Becker in an article by the late Lou uit den Boogaard on page 477 in EQM. The scale shown here (Fig. 5) is a druggist's scale but I got this scale from the museum as a letter-scale. A small brass plaque behind the weights (Fig. 6) tells us it was used as a letter scale by the "Administratie Der Posterijen". On the left-hand side of the beam is the name "Becker's Sons" (Fig. 7). On the right-hand side is the word "Rotterdam" (not shown).

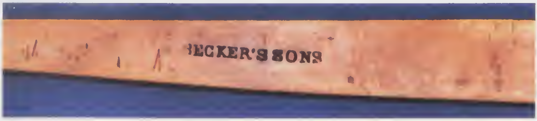
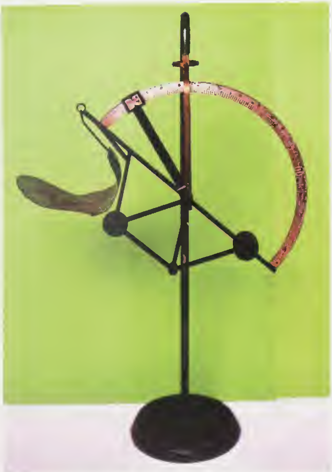


Fig. 7. Engraved on the left beam arm of the scale shown in Fig. 5 above is Becker's Sons. Rotterdam is engraved on the right beam arm.



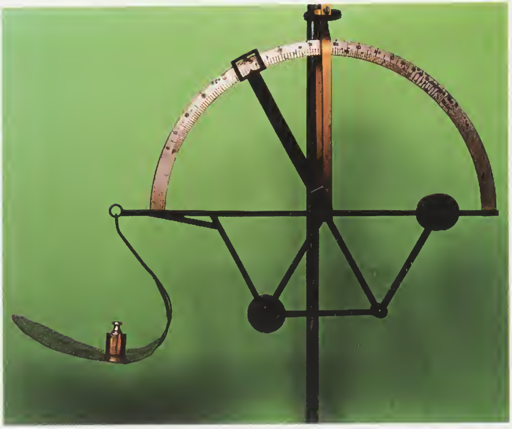


Fig. 8. ↖↖ Oosting's scale was for internal use to check for sufficient postage.
Fig. 9. ↗↗ With a load applied the dial rotates within a fork affixed to the standard.

Fig. 8 is a very strange scale. It is a design by engineer Oosting, chief of the Telegraph Workshop at The Hague. The scale was for internal use to check if letters and other postal articles were sufficiently stamped. The dial (bow) is graduated to 200 grams and is divided by 1 gram to 100 grams and by 5 grams up to 200. The pointer with window is fixed on the axis. The dial rotates between the legs of a fork which hangs movable on an iron standard. The two ends of the bow are connected to an iron bar under which are three iron triangles with two iron counter-poises. Fig. 9 shows the scale loaded with a weight of 50 grams. The brass pan hangs at the extremity of the bar. The scale is 67 cm tall and the standard is painted green. Only a few of these scales were made. The scale was shown for the first time at an international exhibition at Brussels in 1910.

Further Paper Scales and Balances

BY DAVEN CHAMBERLAIN

In a recent article[1] the author added to information published in this journal previously[2] concerning scale designs utilised in the paper industry. This article contains further descriptions of scales obtained from old journals of paper-making that add to information contained in the two earlier publications.

Hitherto descriptions of such balances have been confined almost exclusively to those used to measure the weight per unit area of paper in a laboratory or office environment. This article commences by describing further examples of this kind, before veering into a new direction, where scales are used as analytical tools to aid the analysis of paper's constitution. Two new types of specialist scale are described: those for moisture measurement, which are dedicated to use in the pulp and paper industry; and those for ash measurement, which are examples of general balances to be found in late Victorian chemical laboratories. Large scales for use in a manufacturing environment are also described in passing.

Basis Weight Scales

A publication of the early 1930s described two new forms of paper and board scales, both of which were contrasted with their 'old fashioned' equivalents, the latter being pendulum scales of the design commonly

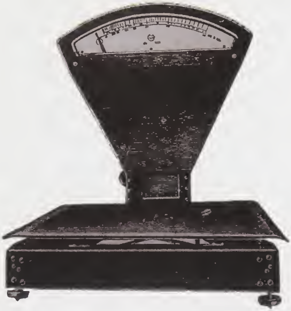


Figure 1. ↗↗ Table-Board-Sorting Scale.

referred to as quadrant scales[3]. The modern board scale, shown in Figure 1, was of a platform design; the indicator was fitted with a damper, and weight was registered on an eye-level dial. Meanwhile, the paper scale in Figure 2 was evidently based around a steelyard design. First the poise was moved to the correct nominal weight for the paper, then a paper sample of the correct size was placed in the holder and a locking nut was freed to activate the balance mechanism. The indicator registered both whether the sample was over or under weight, and whether it was within accepted tolerance. Both scales were made by Messrs. Merseburger Waagenfabrik A. Dresdner, Merseburg a.d. Saale.

The earlier article by Crawforth-Hitchins, EQM 1693-1705, was illustrated with numerous designs of pendulum scales. The two shown here in Figures 3 and 4 are both French designs, dating from the 1950s[4], that are noticeably different from previous examples. The second was for ultra lightweight samples below 50g/m2, so the whole mechanism was housed in a box to protect it from draughts.

A French board scale of similar vintage to the pendulum scales is shown in Figure 5[5]. It is far heavier in construction, and made to weigh sheets of up to 4-5 kg.

The last laboratory device, illustrated in Figure 6, dated from the 1920s and was made by the Torsion Balance Co., New York City[6]. So far this appears to be a unique example of a torsion balance being used to assess basis weight of paper.

Industrial Scales in Paper Mills

All scales described previously were for use in laboratory or office settings, with small paper samples. Yet obviously in a paper mill or warehouse environment larger scales would be needed. Figure 7 shows an early example of such a scale, made for large bulky items such as pulp bales[7]. The significant feature of this scale was the patent mechanism for recording the weight; a ticket was placed in a slot at the top of the pillar [I think this may mean the poise], and depression of a handle imprinted the ticket with a weight value in either metric or imperial quantities.

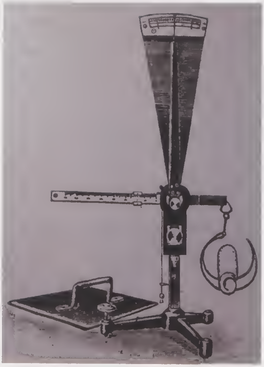


Figure 2. ↖↖ Plus-Minus Scale.

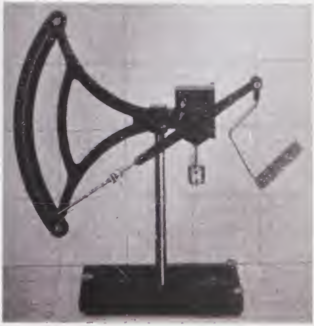


Figure 3. ↗↗ Lhomme et Argy pendulum scale.

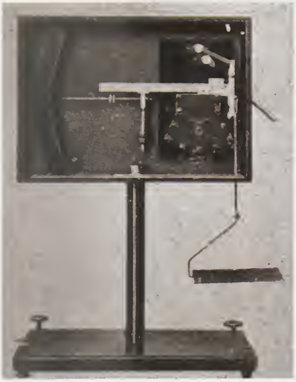


Figure 4. Pendulum scale for lightweight sheets.

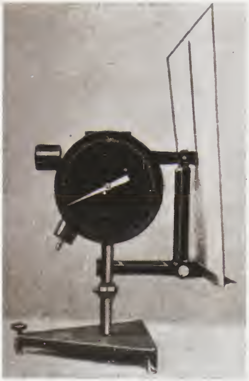


Figure 5. Board scale.

Almost three decades later the same manufacturer was offering a range of scales, all of platform design, for the same purpose – see Figures 8-10[8].

Moisture Balances

Measurement of moisture is of fundamental importance in the paper industry; for pulp it signifies the saleable mass, while for paper it has a major influence upon important paper properties, and therefore end-use performance.

The simplest and oldest way of measuring this property is to weigh the material in air, force-dry it in an oven, then re-weigh. This measure-ment could be made with any early analytical balance and oven. However, in late Victorian times specialist ovens were developed for the heating step. The next stage of development was to incorporate a balance for direct measurement of changes in weight. Figure 11 shows a late Victorian example of German origin, which used a steelyard design of balance[9]. A patented design from the early 20th century is shown in Figure 12, which used a scale of equal arm design[10]. A later steelyard model, dating from the 1940s, is shown in Figure 13[11].

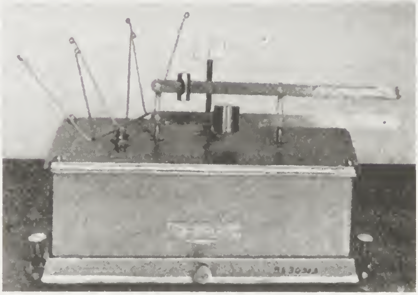


Figure 6. Torsion balance.

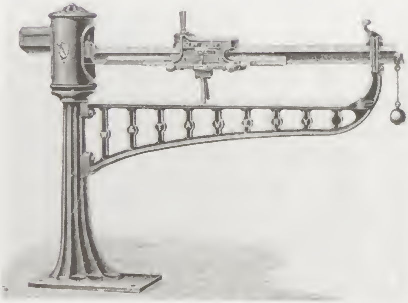


Figure 7. Recording Steelyard, by W. & T. Avery, Ltd.

All three designs work in a similar way: one arm of the balance extended into the oven, ending in a cage in which a pre-weighed sample could be placed. The system was balanced relative to the moist sample, then re-balanced once moisture had been driven off. This gave a direct measure of weight change, attributable to moisture loss.

Ash Balances

Inorganic pigments such as clay or chalk are often added to paper, and the method of their quantification requires the paper to be burnt at between 500-1000°C. The weight of ash remaining is then expressed as a percentage of the original paper weight, in an analogous way to moisture measurement.

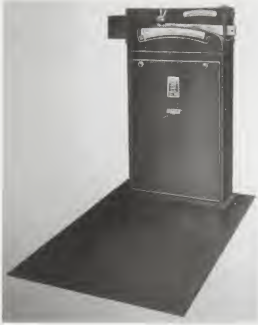


Figure 8. ↗↗ Avery model 557 semi-self indicating platform scale.

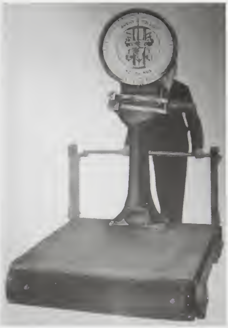


Figure 9. ↗↗ Avery model A58 self indicating portable platform scale.

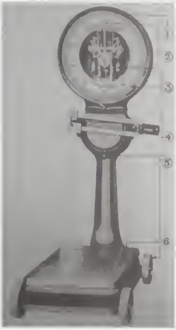


Figure 10. ↗↗ Avery model A115 self indicating portable platform scale.

Although not designed specifically for paper, the images of ash balances shown in Figures 14 and 15 are taken from late Victorian treatises on paper testing, and show contemporary analytical balances used in paper testing laboratories. The first was a delicate pendulum balance, not unlike those used for measurement of basis weight; the wire hanger on the far right was used to hold a wire net in which the paper was burnt[12].

The second balance was stated to be superior, and was described as a 'substitution balance', being of an equal arm design[13]. The left arm had a permanent weight (of 21g) attached. The right arm supported two pans: the upper for holding a glass tube in which the paper or ash was placed, and the lower for housing additional counterweights. To start, a paper sample was placed in the tube and sufficient weights were added to balance the system. The paper was then removed and burnt, the residue being added again to the glass holder. The number of counter weights removed to regain balance gave a direct reading of the weight of organic matter lost, and by difference, the ash weight.

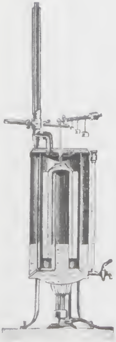


Figure 11. ↙↙ Combined moisture oven and steelyard balance, by Knöfler.

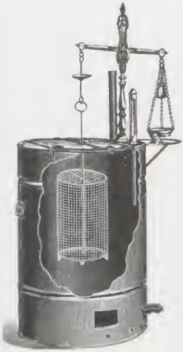


Figure 12. ➤➤ Combined moisture oven and equal-arm balance, by J. Wright of Bradford, England.

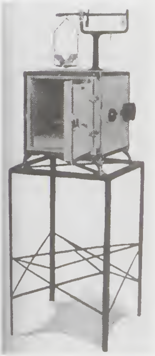


Figure 13. ➤➤ Combined moisture oven and steelyard balance, by Williams Apparatus Co, Inc.

As stated in my previous article, today these types of balance have largely been replaced by modern electronic designs, which can be used for all general weighing scenarios in a paper testing laboratory. The only slight difference is for moisture, where some modern electronic balances have in-situ heating systems using either Infra Red elements or microwaves.

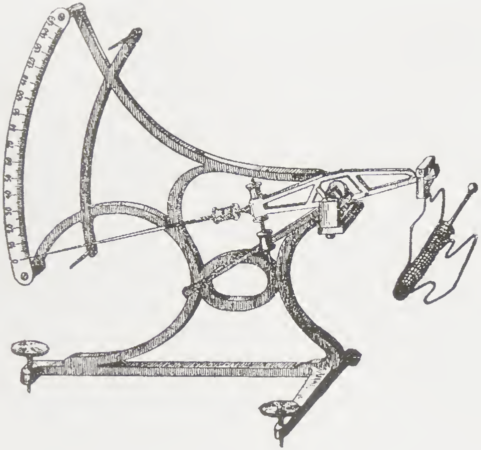


Figure 14. Post's Ash balance.

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2. D.F.Crawforth-Hitchins, "Paper Scales", *EQM* 1993, Issue No. 3, pp. 1693-1705.

3. Anon, "New Special Scales for Control of Substance in Paper Making", *The Paper-Maker and British Paper Trade Journal*, Vol. 84, 1932, p. TS266.

4. Anon, "Essai Physico-Mechaniques des Papiers", *La Papeterie*, Vol. 83, 1961, No. 12, supplement p. 100*.

5. Anon, "Essai Physico-Mechaniques des Papiers", *La Papeterie*, Vol. 84, 1962, No. 1, supplement p. 101*.

6. Anon, "Paper Testing Methods", *Paper Trade Journal*, Vol. 75, July 20th 1922, p. 46.

7. Anon, "Improvements in Weighing Machines", *The Paper-Maker and British Paper Trade Journal*, Vol. 24, 1902, pp. 417-418.

8. Avery adverts in *The Paper Maker and British Paper Trade Journal*: Vol. 71, 1926, p. 484; Vol. 72, 1926, p. 11; Vol. 73, 1927, p. 9. Another advert in Vol. 72, 1926, p. 469, shows a model A116, which was very similar to the A115, only larger and thus not portable.

9. R.B.Griffin and A.D.Little, *The Chemistry of Paper-Making, Together with the Principles of General Chemistry*, 1894, p. 449.

10. Anon, "A Drying Oven for Testing Wood Pulp and Paper", *The Paper-Maker and British Paper Trade Journal*, Vol. 46, 1913, p. 381.

11. Advert, *Paper Trade Journal*, Vol. 112, 20th February 1941, p. 163.

12. P.Norman Evans, "The Determination of The Ash", *Paper Trade Review*, Vol. 15, 1891, pp. 274-275.

13. P.Norman Evans, "The Determination of The Ash", *Paper Trade Review*, Vol. 15, 1891, pp. 294/296/298.

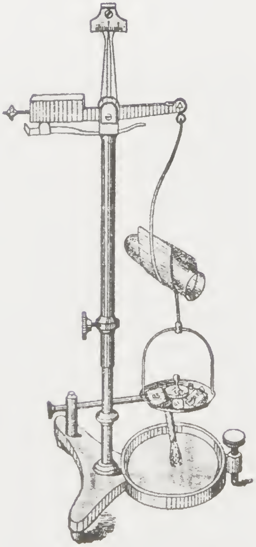


Figure 15. Substitution balance for ash measurement.

A Zoo of Letter Scales

BY ANDRÉ SOL

In the course of years several combinations of animal and letter scale have been made. Think of an animal - or a part of an animal - beside, or on, or under, or in a letter scale.

In this article a number of combinations pass in revue. Although the below-mentioned enumeration probably is not complete, nevertheless it will become clear that one can talk of a real zoo. Jürgen Borgert made the easiest combination in 1979 in his book with collected feuilletons [short stories] in the title: *Elefant auf der Briefwaage* (*Elephant on the Letter Scale*)[1].

Picture postcards

Some old picture postcards present very pretty combinations. Photographs or drawings of chickens or kittens on a letter scale prove to be popular. The picture postcard with the chicken on the letter scale (Fig. 1) was made for use in Russia: the text below the scale wishes the receiver a Glorious Easter. The illustrator made a mistake: the figures of the scale descend instead of ascend when the load increases. The card has the printing P.T.L. Art de Vienne No. 530/4 made in Germany, so it was printed in Germany. The sender has dated the postcard on April 10, 1916. In that year Easter was on April 23. The postal stamp of 3 copecks probably was not cancelled until 1918 in Petrograd. In 1914 Saint Petersburg was renamed Petrograd. Saint Petersburg sounded too much like German, and Russia was at war with Germany during the First World War. The February Revolution and the October Revolution followed in 1917: they resulted respectively in the end of the period of the Czars and the beginning of the Soviet Era. Petrograd lost its status as capital. In 1924 the name Petrograd was changed to Leningrad to honor the deceased Lenin. The October Revolution took place in Russia on November 7, 1917. In spite of this date this revolution is named 'the October Revolution' because at that time the Julian calendar was used. The date according to this calendar was October 25, 1917. The Russian communists (Bolsheviks) – led by Lenin - made a successful attempt to seize power: the provisional government was overthrown. This government was formed after the February Revolution in that same year in which Czar Nicolas II was forced to step down. This made Russia a communist state[2].

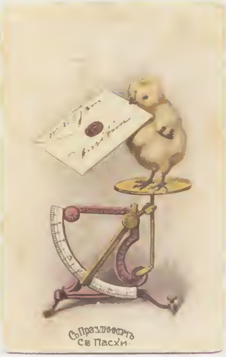


Fig. 1. Easter postcard made for Russia, chicken on letter scale.

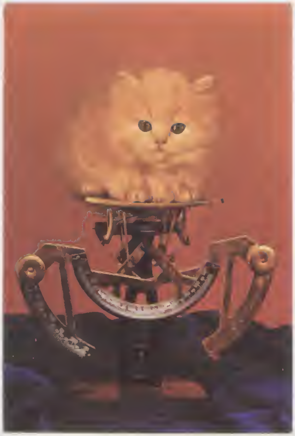
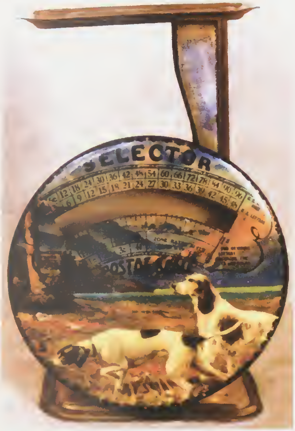


Fig 2. Postcard with kitten on top of a German letter scale.

The picture postcard with the kitten on top of letter scale (Fig. 2) was written in the Netherlands. Due to the lacking of a postal stamp and of a cancellation it is not possible to date this postcard very precisely. This card was printed in the Netherlands and the place to fix the postal stamp bears the code P103. At the left the postal scale has a logo: the two capitals J and M and below this has the text: BILATERAL. The German factory of postal scales Jakob Maul used this logo JM between September 1912 and January 1983. This bilateral letter scale design most probably was produced during a great number of years.



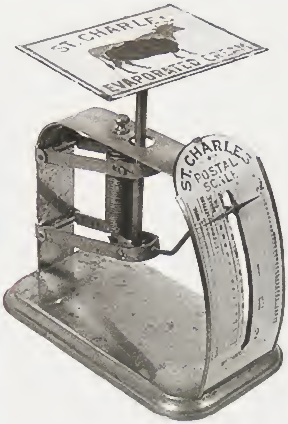
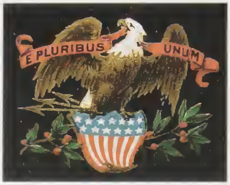


Fig. 3. ↖↖ (Far Left) Dogs on an American Selector letter scale.
Bob Stein Collection.

Fig. 4. ↖↖ Cow on letter plate of St Charles Evaporated Cream.
Peter Laycock Collection.

Fig. 5. ↙↙ Eagle on model National of Pelouze.



Imprints and stickers

Letter scales exist which have a figure of an animal added as beautification, sometimes just in the form of an imprint or a sticker. The American letter scale of the brand Selector has a model on which two sporting dogs are pictured on the front plate (Fig. 3). A similar scale is also shown on the last page of Equilibrium 2001 number 4.[18] A cow is part of the advertising imprint of St. Charles Evaporated Cream shown on the top surface of the weighing plate of an American postal scale (Fig. 4). The American eagle used in the form of an imprint or sticker is on several designs by Pelouze, for instance on the model National (Fig. 5). A similar eagle is printed in the article about the scales made by Pelouze in Equilibrium.[15]

Animal (-part) next to scale

An eagle at the base of a French letter scale is shown on page 14 of the book by B. and J. Berning.[3]

Traditionally the eagle is a national symbol in Germany. An eagle (Fig. 6) is standing on top of the standard of older balance.[20] A slightly different example is the German balance; here the beam of the balance is suspended in the beak of an eagle (Fig. 7). This illustration is derived from an old poster presenting the designs of the German manufacturer of (letter) scales Philipp Jacob Maul from Hamburg.[21] Years later this design was made as replica by the German firm Kern (Fig. 8 and Fig. 8a).

In the article 'Die Geschichte der Briefwaage' (German, translation: 'The History of the

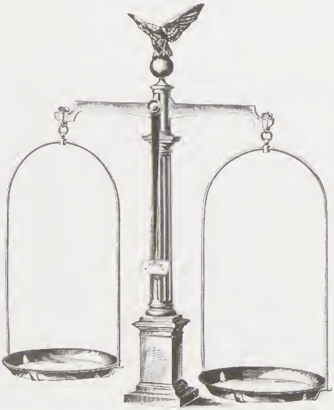


Fig. 6. ↗↗ German Eagle on top of standard[20].

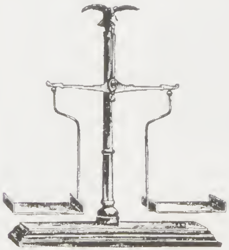


Fig. 7. ↗↗ Eagle holding the beam in it's beak.

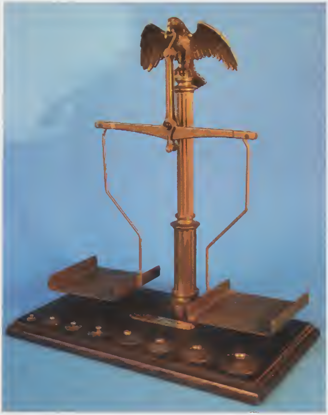


Fig. 8. ↑↑ Replica made by Kern.

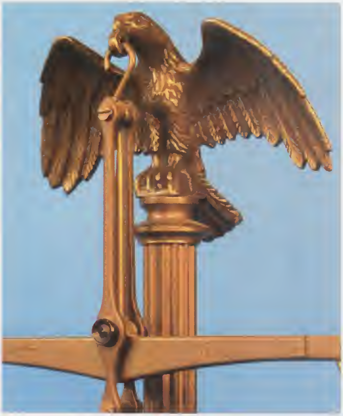


Fig. 8a. ↑↑ Detailed view of the replica showing the eagle.

Letter Scale') by Friedhelm Rübenthal[4] the caption of the first photo on page 60 tells us a Prussian eagle is standing on top of the equal armed balance dating from about 1860. On page 69 of the same article a sketch of an English letter scale is shown. This letter scale is suspended in the beak of an eagle sitting on a branch of a tree. Michael Crawforth also mentions this special design.[5] He refers to an article by John Mussell in Art & Antiques Weekly of February 1977, which also contains a color picture of this letter scale. This letter scale design has another appearance in the journal Equilibrium.[6] In the past years complete and incomplete specimens of this design were sold at the action site eBay a few times (Fig. 9 and 9a).

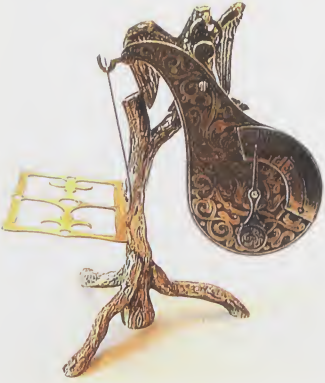


Fig. 9. ↖↖ The eagle holding the swan-neck letter scale.

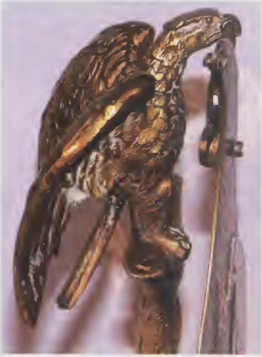


Fig. 9a. ➤➤ Detailed side view of the eagle.

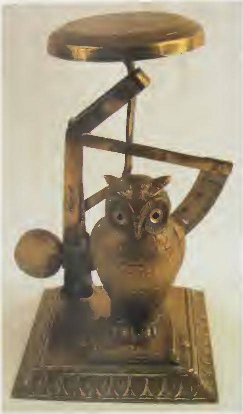
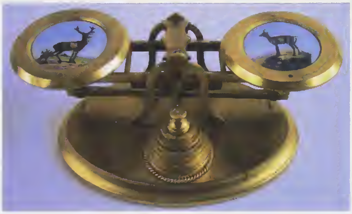


Fig. 10. ▲▲ Owl standing on top of an open book next to a Fertig type letter scale probably made in Germany. The letter scale is marked DÉPOSÉ and D.R.P. ANG. is stamped on the extra pendulum of the indicator.

Bob Stein Collection

A little owl standing near a German letter scale (Fig 10) of the type Fertig is shown as number 390 in the collection of the American Bob Stein[16].

Probably originating from the Black Forest, in Germany, are several combinations of a brown bear carved out of wood with a letter scale. The bear with letter scale sits, stands, or is lying on the back (Fig. 11). A different example was presented years ago by Uit den Boogaard in Meten & Wegen.[8] A few years later the same brown bear was presented to the readers of Equilibrium.[9]



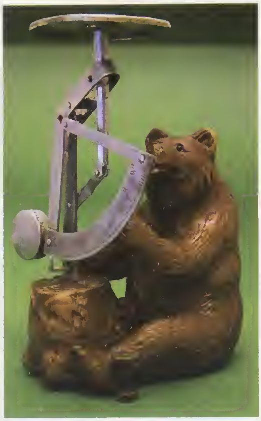


Fig. 11. ▲▲ A carved brown bear sits beside a small quadrant scale.

Fig. 12. ◄◄ Deer pictured on the plates of a roberval postal scale.

Bob Stein Collection

On an equal-arm balance made completely of gilded brass, in the collection of Bob Stein, a stag (or red deer) is pictured on the left top plate and a doe is pictured on the right top plate (Fig 12)[19].

A cat-shaped letter rack made of round steel wire, with a brass finish, has positioned, on its tail, a little postal scale with a capacity of 2 ounces, Fig. 13. This item was made in Japan for Menschik Goldman Inc. I don't know the date.

A part of the antlers of a red deer or roe sometimes is used as a base for letter scales. They originate probably from wooded regions and were intended for tourists and hunters.

The English letter scales mounted on a horse's hoof are rather odd. (Fig. 14).

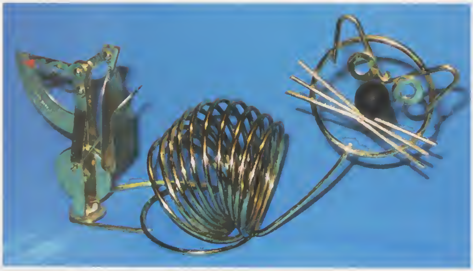


Fig. 13. ▲▲ A cat-shaped wire letter rack is next to a little postal scale.

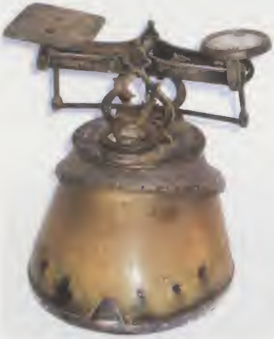
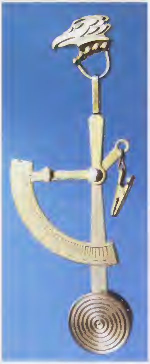


Fig. 14. ►► An English letter scale mounted atop a horse's hoof.

Animal (-part) as scale part

An American hand held letter scale with the name 'the Personal Postman' made by Vesco Products Corporation, uses only the head of the eagle as a spot to hold the scale between the fingers (Fig. 15 and Fig. 15a).

A little pigeon holding an envelope in its bill is worked up in a Sterling silver hand-held scale by Gorham (Fig. 16). The complete letter scale is shown on page 26 of Berning[3].



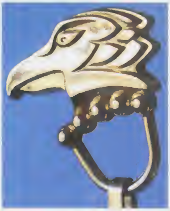


Fig. 15. ◄◄ Letter scale named 'the Personal Postman' by Vesco Products Corporation.

Fig. 15a. ▲▲ Detailed view.

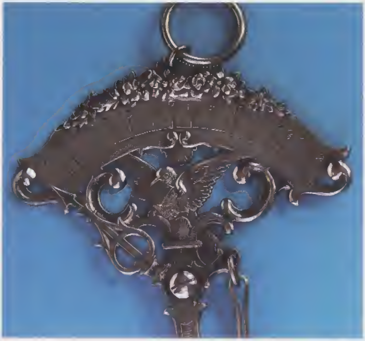
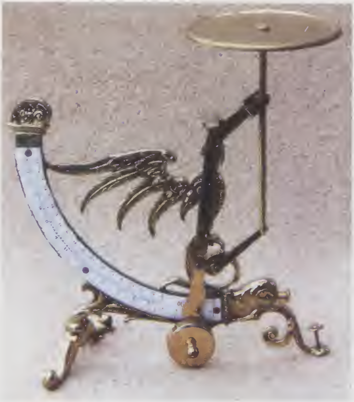


Fig. 16. ▲▲ Pigeon holding a letter in its bill

Fig. 17a ▼▼ Dolphin head



A remarkable combination is the old letter scale with the dolphin head and a caryatid (Fig. 17a). A caryatid is a sculptured female figure used as a pillar, original Greek literally meaning 'priestess from Caryae'. This design is shown in the catalog of Kistler (Fig. 17b) from 1908[22]. The letter scale was deliverable with different ranges in Gramms, in ounces, or in Loths. This letter scale is shown and discussed elsewhere more than once.[7] [14] This letter scale is also pictured on page 13 of Berning.[3]

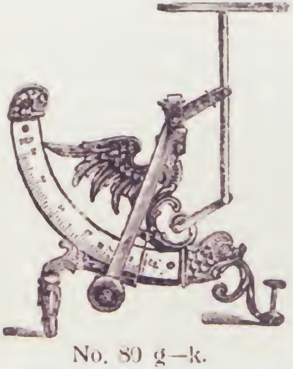


Fig. 17b. ▲▲ Kistler catalog illustration from 1908.

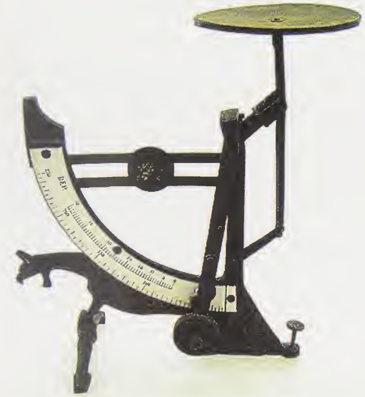
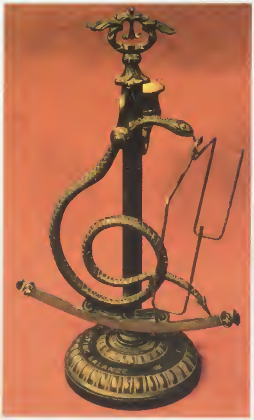


Fig. 18. Dragon.

A dragon as part of a letter scale is an even more rare appearance (Fig. 18).

The front cover of Equilibrium 2003 number 1 shows a British letter scale with the name 'Elliston 's self-adjusting balance' on the base (Fig. 19). A snake forms the indicator arm. The tail end is the pointer and the letter holder of folded round wire is suspended from the tongue of the snake.[17]

Fig. 19. The beam is formed as a snake, a very popular motif in 1839 and 1840, on this Elliston's Self-Adjusting Balance.
Renton Collection



Scale resembles animal

Rübenthal[4] describes the form of the Hall's patent scale: fischähnlicher Form (= looking like a fish). Elsewhere this design is above all described with the English term gooseneck (in Dutch: ganzenek or nowadays written as ganzennek).[10, 11]

A slimmer variant of the model often is described as swan neck[12] (in Dutch zwanehals). Noteworthy: according to my Wolter's English-Dutch Dictionary from 1974,[13] the translation of gooseneck is zwanehals, this of course is still in the old spelling without the second 'n.' Also swan-neck is translated zwanehals, nowadays written as zwanenhals.

Animal as scale

The shark (Fig. 20) originates from China. It is a combination of letter opener, staple remover and letter scale. The design was made by Lin Fang-Hui and was rewarded a shared third place at the Inno-Design Awards of the Giftionery Taipei in 2000. I could not acquire a specimen. It is unclear if this shark was ever produced in series.

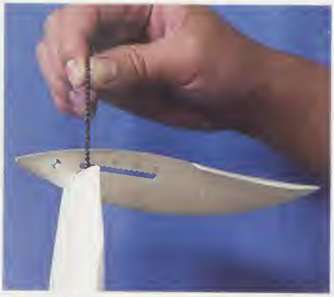


Fig. 20. Shark, designed in China

A modern hand held scale is made in the shape of a fish (Fig. 21).

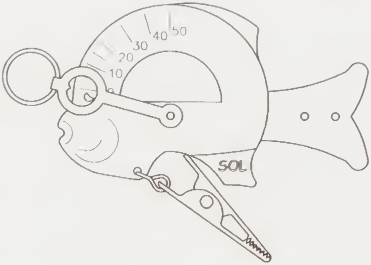


Fig. 21. Modern handheld scale shaped like a fish.

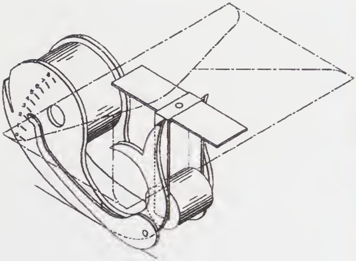


Fig. 22. Fish shaped letter scale based on US patent 2,476,399 issued to Joel Malvern Benjamin on July 19, 1949.

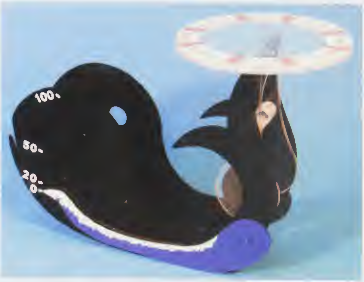


Fig. 23. The fish made in plastic by the author.

Another letter scale also with a fish shape (Fig. 22) is described in an American patent of 1949. The designer is Joel Malvern Benjamin. The construction rolls to a new equilibrium when loaded. I don't know if this design really was produced or not at that time. I made a plastic copy of the design (Fig. 23) and made the scale in grams instead of ounces. On a hard and flat surface this nice looking letter scale functions well.

The penguin (Fig. 24) is a design made in Germany. It is a combination of a thickness meter for letter mail, a postal scale and a very clumsy letter opener. The design, made by Jens Schrader, was protected with a German patent in 1999. White and yellow penguins were produced.

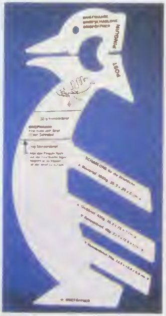


Fig 24. A German penguin

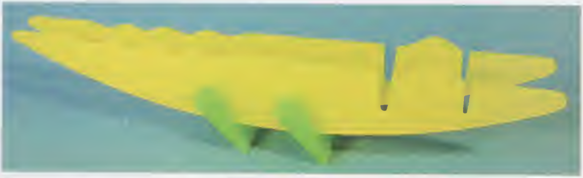


Fig 25. 'Kroko' the German crocodile.

'Kroko' is a German crocodile (Fig. 25). It is a rocking letter scale at the postal rate limited to 20 and 50 grams. The design dates from 1999, and was made by Markus Roling and Volker Zitzmann of the Design Office Take2, and Peter Kirchhoff. The crocodile is available in two color combinations.

A swan is implemented in a French letter scale (Fig. 26). It is not clear whether this is a single or a mass-produced product.

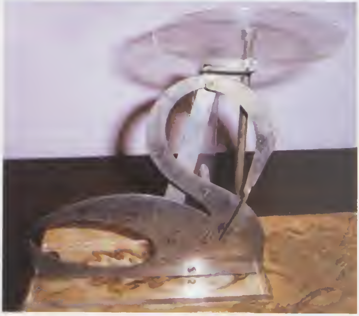


Fig. 26. Swan made in France.

The 'Fly Aweigh®' (see cover) undoubtedly is the most beautiful letter scale design of the recent years. It is a design made by the American John McMillan. This magnificent pelican is protected with an American patent with the number US 5,895,893. A simplified patent figure is shown in Fig. 27. Besides this pelican this letter scale is also for sale in the form of the bald eagle and also in the shape of the great blue heron. This letter scale is made from thin stainless steel plate and is suspended by thin stainless steel wires. The contours of the bird are accentuated by dotted lines of minimally etched dimples. At rest the white lacquered pelican hangs as a mobile with a weight of two ounces in the letter clip. A little pull at this clip starts a graceful movement of the wings. The weighing range is 3 ounces. When weighing a letter the weight is first removed from the clip. Above all it is a good-looking design.

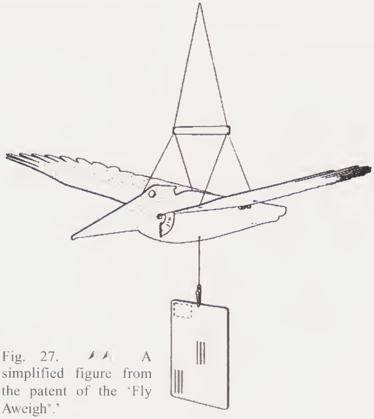


Fig. 27. A simplified figure from the patent of the 'Fly Aweigh®.'

Conclusion:

My above-mentioned enumeration is presumably not complete. I invite the readers to send in their additions to this letter scale – zoo, preferably together with good photographs to illustrate their supplements.

Note:

This article is still to be published in the Journal of the Dutch Society of collectors of Weights & Measures. In Dutch: Meten & Wegen. It was translated and slightly edited by the author.

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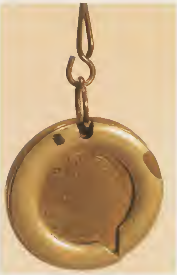
15. "Pelouze Bow-front Postal Scales", Laycock P., EQM 2004 issue No. 1, pp. 2877-2881, fig. 7 upper left, fig. 11.
16. Bob Stein sale site address http://www.steinscales.com/collection.html number 390.
17. Cover picture showing 'Elliston's self-adjusting balance', EQM 2003 issue No. 1, pp. 2757-2758.
18. "Showcase", EQM 2001 issue No. 4, pp. 2643-2644.
19. Bob Stein sale site address http://www.steinscales.com/collection.html number 379 for sale unfortunately removed. Luckily found again at the ISASC web site (www.isasc.org) Gallery RS Collection, on page 6: rs379.
20. Gottlieb Kern & Sohn – Ebingen, Illustrated pricelist 1909, page 72.
21. Philipp Jacob Maul - Hamburg, number 51 at poster presenting (letter) scales, about 1921.
22. Preisliste Präzisions- Waagen- & Gewichte- Fabrik G. Kistler, Ebingen, 1908, page 67.

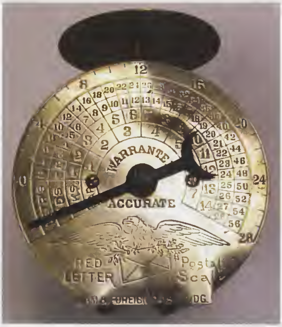
Showcase

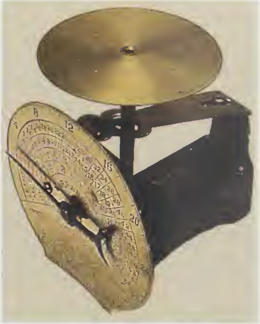
More Zoo Postal scales.



↑↑ This 1" diameter combined letter scale, envelope opener and cigar cutter has a pelican on a nest engraved on its face. The capacity of this diminutive scale is 2 oz and it was made for the New Orleans Exposition in 1884 & 1885 It is based on US patent no. 314,801 that was awarded to Clausen on March 31, 1885.

Peter Laycock Collection.



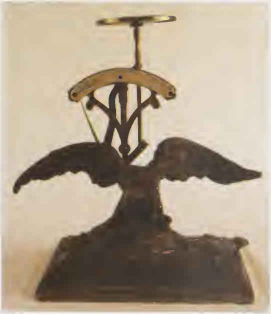


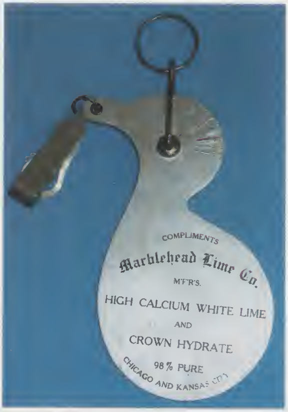
↑↑ The Red Letter Postal Scale pictured above has an eagle with a letter in its talons engraved on the dial. It has a 28 ounce capacity and computes rates for letters, merchandise, books and papers based on US postage rates in effect from 1885 to 1917. It has a flexure spring mechanism and measures 4.125" tall by 3.5" deep with a 3.5" diameter face.

John Cattle Collection.

→→ A French pendulum scale featuring a sculpted bronze eagle with a 7" wingspread, mounted on bronze oblong base measuring 6" wide x 3" deep. It has a round letter plate and quadrant ivory face calibrated in grams (0-100). Marked "E.W;" [Ed Widmann, Paris, 1909-1914] "Depose" on scale. Eagle sculpture signed: "A. Marionnet."

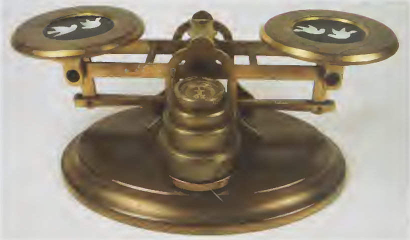
Bob Stein Collection.





←← H M Willis was issued US patent no. 822,804 on June 4, 1906, for this duck-shaped advertising letter scale. It measures 6" long by 2" wide on the body. It has a 4 ounce capacity and is made of aluminum with brass gromets and steel rings. Printed on the back are domestic postage rates for first through fourth class mail.

Jan Berning Collection.



→→ This roberval postal scale features a pair of doves on each of its petra dura plates. Made of brass its base measures 5" wide.

Bob Stein Collection.

Cleaning: A Dealer's Viewpoint

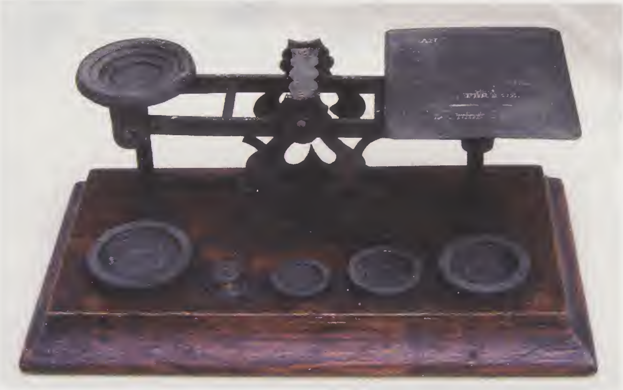
BY ANDREW SOWERY

As a follow up to Ken Govier's very good article in Equilibrium on cleaning or not; as a dealer I would like you to know my point of view on cleaning scales.

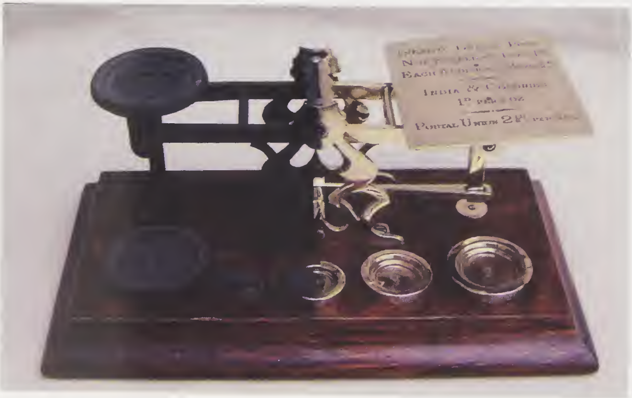
Many of you have met my brother Michael and me when you have visited the N.E.C. Antiques for Everyone. We clean and polish most of the scales we sell, with the exception of rare scales that have not been touched before.

Most of you collectors have the standard S Mordan and Co. scales, so cleaning and polishing of these make them more saleable as desk furniture or ornaments.

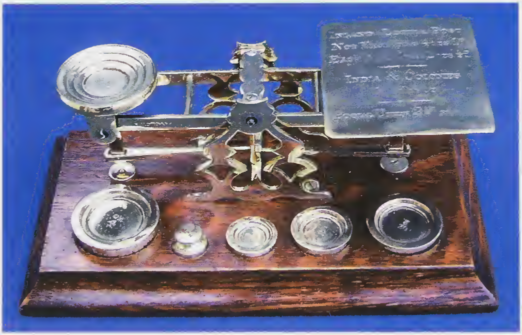
A wife buys for her husband's birthday or Christmas present, a set of scales to go on his desk. She does not want a dirty or tatty set of scales, nor does he. So his nice clean and polished set of scales are on his desk. He fiddles and plays with them and wonders if there are any different types. He or his wife buys another set and this starts a collection and a new member for ISASC.



↗↗ A set of S. Mordan scales purchased in untouched condition with original weights.



↖↖ To show the difference we half cleaned them and put them back together.

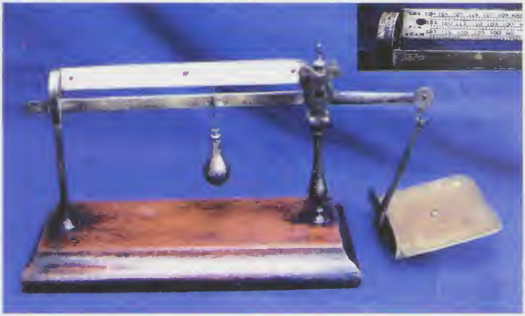


◄◄ Scales now finished approximately 3 hours later.

The scales now look as they would have over 100 years ago when they would have resided on a gentleman's desk, and where they will probably now reside in the future. At least 90% of our scales end up as desk furniture or ornaments.

◄◄ My brother has a set of scales in his display cabinet together with paperweights which his wife collects. Whilst I was there on Christmas morning, a little girl of 3½ arrived with her mother and spotted the scales and had great fun weighing her presents. Catch them young!!

Sometimes we have a dilemma. ►► Should we clean or not this set of Avery computing scales recently purchased by us? We have yet to come to a decision.

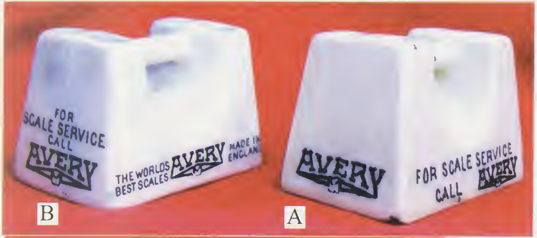


Editor's note: *For other articles on this subject see EQM pages 1203-1210, 1234-1240, 1265-1272, 3035, 3036, and 3155-3161.*

Note: *Be very cautious about touching celluloid, as used by Avery on this graduated chart. It is all too easy to wipe off the graduations.*

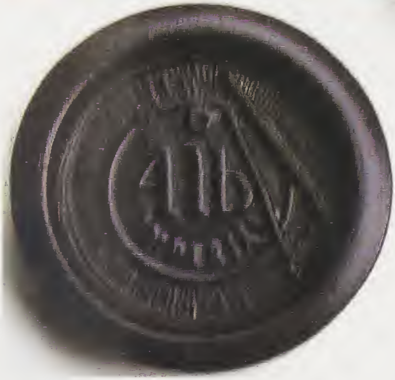
Look - Alike Weights

BY MICHAEL ROBINSON

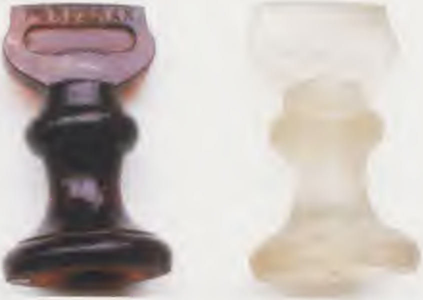

FOR SCALE SERVICE CALL AVERY
THE WORLDS BEST SCALES AVERY MADE IN ENGLAND
B
AVERY
FOR SCALE SERVICE CALL AVERY
A

◄◄ These two Avery advertising, china pen and ink holders in the form of 2 pound bar weights were given out to good customers by the Avery representatives. It is believed that example 'A' 'For Scale Service Call Avery' was purely for use in the UK; Example 'B' 'The Worlds' Best Scales' was for use by the overseas representatives. I only know of two examples of 'B' and both came back to England from New Zealand. They measure 2" wide by 3" long and both types are rare.

For anyone wishing to remove the ink stains, soak in tepid water and clothes-washing powder for three days followed by at least one day of soaking in clean water.

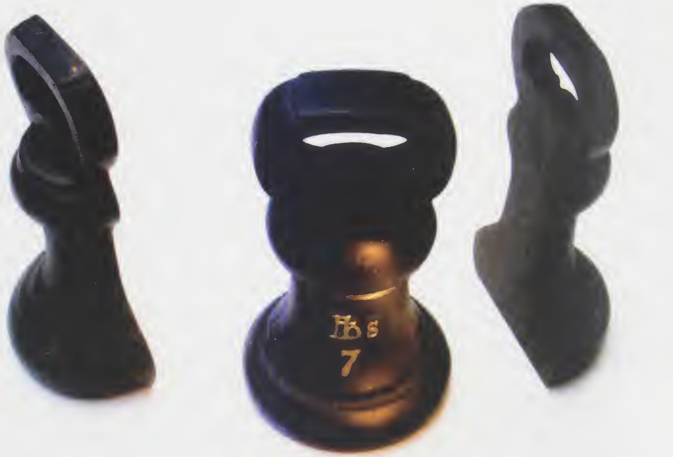


◄◄ This pottery match striker ashtray was made in the shape of a 4 lb cast iron stacking weight by Bretby Art Pottery between 1892 and 1900. It was one of a number of novelty items produced by the firm at their Woodville Works near Swadlincote, Derbyshire and appeals to collectors of ashtrays, match strikers, Bretby and weights. It measures $4^{5}/_{8}$" wide by $1^{1}/_{4}$" deep.



►► These amber and clear glass paper weights were handed out by the manufacturers' representatives to chemist shops that placed orders for PONDERAX, a slimming aid first put on the market after the end of the 2nd World War. During the first year on sale certain members of the public suffered adverse reactions, leading to one person's death being directly linked to Ponderax: product immediately banned.

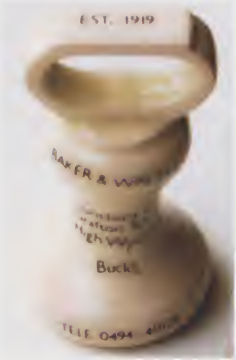
I wonder whether these gifts in the shape of 2 lb bell weights measuring 4" tall by $2^{3}/_{8}$"diam. were produced in the range of colours and given out relative to the size of order placed? ie: Clear = derisory amount; Amber = ok but could do better; Green = brilliant, thank you very much; Blue = do you fancy dinner tonight?! Does any member possess different colours from the two illustrated?



▲▲ These half bell weights were sold to me by a dealer as 'shadow' door stops. They are cast iron and shown either side of an actual 7 lb cast iron bell weight. They are the same height and purely out of interest together weigh 6 lbs 8 [illegible] ozs.

►► Baker and Walsh were scale manufacturers, so this china paperweight was an ideal gift for good customers. It resembles a 1 lb bell weight and measures 3¼" tall.

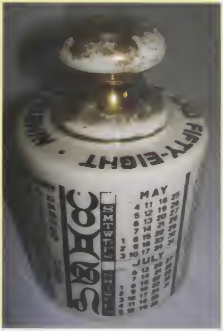
Acknowledgements: The author wishes to thank Phil Holroyd and Ken Govier for the excellent photographs and Derek Timbrell for his help with this article.



Showcase

This ceramic weight shaped paperweight has a 1958 calendar and the signs of the zodiac imprinted on its sides. It measures 6.7 cm in diam.and is 10 cm in height from base to top of knob.

John Knights Collection.



A LETTER SCALE OF B. HOLSBOER EXAMINED MORE CLOSELY

BY ANDRÉ SOL

In an earlier article published in Meten & Wegen[1] Rein Kok presents and describes a couple of particular postal scales made by B. Holsboer. Kok refers, in his article, to the study of D. Mooij[2] on Dutch instrument makers and related trade from the period 1840 – 1940. In this study Mooij also gives in short the history of the instrument maker Berend Holsboer from Arnhem and his little firm established in 1865. She writes *Berend mostly made measuring instruments for geodesy, for instance distance meters and altimeters, but also different physical, mathematical and optical instruments.* He also made letter balances for the Post Office.

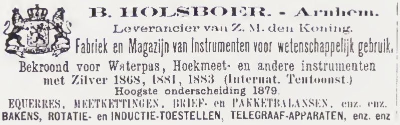

B. HOLSBOER. - Arnhem.
Leverancier van Z. M. den Koning.
Fabriek en Magazijn van Instrumenten voor wetenschappelijk gebruik.
Bekroond voor Waterpas, Hoekmeet- en andere instrumenten
met Zilver 1868, 1881, 1883 (Internat. Tentoonst.)
Hoogste onderscheiding 1879.
EQUERRES, MEETKETTINGEN, BRIEF- en PAKKETBALANSEN, enz. enz.
BAKENS, ROTATIE- en INDUCTIE-TOESTELLEN, TELEGRAAF-APPARATEN, enz. enz

Fig. 1. Advertisement.

A small advertisement in "De Opmerker"[3] a weekly paper for architects, engineers, manufacturers, contractors and foremen, later the organ of the society *Architectura en Amicitia,* of August 9, 1884, see Fig. 1, gives additional information about the firm B. Holsboer – Arnhem:

Leverancier van Z.M. den Koning.
Fabriek en Magazijn van Instrumenten voor wetenschappelijk gebruik.
Bekroond voor Waterpas, Hoekmeet- en andere instrumenten
met Zilver 1868, 1881, 1883 (Internat. Tentoonst.)
Hoogste onderscheiding 1879
EQUERRES, MEETKETTINGEN, BRIEF- PAKKETBALANSEN, enz. enz.
BAKENS, ROTATIE- en INDUCTIE-TOESTELLEN, TELEGRAAF-APPARATEN, enz. enz.

Translated:
Supplier for his Royal Highness the King
Factory and Storehouse of Instruments for scientific use.
Awarded for Leveling instrument, Goniometer and other instruments
with Silver 1868, 1881, 1883 (International Exhibitions)
Highest honor 1879
Equerres*, surveyor's chains, letter and parcel balances and so on and so forth
Beacons, Rotation and Induction apparatuses, Telegraph appliances, and so on and so forth

Berend Holsboer lived from 1833 until 1898. After his death he was succeeded by his son Barend (1874-1944). Which B. is meant by the engraving of the name B. Holsboer on a letter scale is not one hundred percent certain. A B. Holsboer scale could perhaps be made after 1898 because son Barend continued the business of his father Berend. He probably did so with a couple of employees who were already employed by his father. For certain those employees were capable of manufacturing letter scales. Earlier this Barend worked as a draughtsman at the South African Railway. According to Mooij, Barend stopped the production of instruments for geodesy at the beginning of the last century. She does not make mention of the production of letter scales in this period. On page 129 of Mooij a receipt is shown with the date October 24, 1867, and printed on the side is *B. Holsboer, Magazijn & Fabriek van Optische, Mathematische & Physische Instrumenten Arnhem Ridderstraat B. 125.* Appendix F[2] of Mooij presents 1865 as starting year of the firm B. Holsboer. Now in 2007 there still exists a firm in Arnhem with the name Holsboer Optometrie. Opticians since 1867 is written underneath the name of the firm. I asked for information about the starting year of the firm. To the best of their knowledge the optical firm has been in existence since 1867. The register of real property with all data of those years was destroyed during the bombardments in September 1944. Holsboer

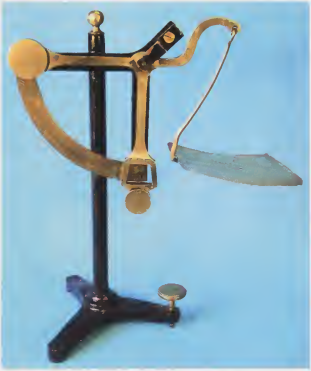
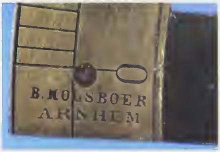


Fig. 2. ◄◄ B. Holsboer letter scale.

Fig. 3. ►► Beginning of quadrant dial showing name and place of maker.



Optometrie does not know exactly when B. Holsboer started; they are however sure the optical department started in 1867.

The letter scale presented in Fig. 2 was made by B. Holsboer from Arnhem. The name and place are on the scale, see Fig. 3. The design does not resemble at all the scales presented by Kok. It is probably not an original design of Holsboer, but probably a well-made duplicate of a letter scale design originating in Germany.

This Holsboer letter scale looks as if it is mounted on a laboratory stand. The fixed frame part is attached to it in a slightly lowered groove with a screw. The quarter circle shaped brass chart is mounted on the before-mentioned fixed frame part with two screws. Also the block part that slots the main pivot is mounted on this frame part with one screw and two precision pins to ensure a proper positioning. The steel main axis is fixed on the brass weighing arm. This weighing arm, see Fig. 4, looks as if it is made totally out of one single part. The reading wire is lowered into the surface of the back of the weighing arm, see Fig. 5. The reading window is shaped beautifully, see Fig. 6. The plate, onto which a letter is placed for weighing, is hooked into the weighing arm. The cross section of this hook piece is not a constant diameter, but slims beautifully towards the free end, see Fig. 7. The chart is engraved and afterwards this engraving is filled with black paint. This improves the ease of reading the scale substantially.

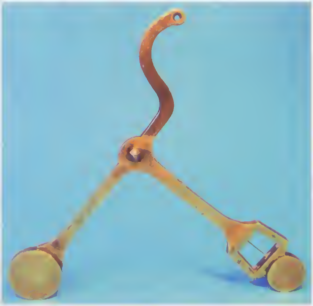


Fig. 4. ▲▲ The weighing arm appears to be made from one piece.

The subdivision per gram results in reading difficulties above 70 grams, Fig. 8. Between 90 and 100 grams, Fig. 9, reading of the scale is not possible for someone aged above 40 years. When weighing a letter, the letter plate continues its swing and hinders a quick reading. At the right of Fig. 10 the letter scale is loaded maximally at 100 grams, at the left the unloaded letter scale is shown.

Rein Kok mailed me a photo of a similar letter scale with a weighing capacity of 250 grams. This letter scale does not bear a name or a mark. Elsewhere I saw an almost identical design with the name C. Schember & Söhne, Wien & Budapest on the horizontal support arm towards the chart. Conrad Schember was an Austrian scale maker who lived from 1811 until 1891. The firm was founded in 1852. According to Schnieder and Bentzinger[4] the firm was active under the name C. Schember & Söhne since 1913.

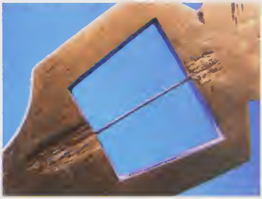


Fig. 5. ▲▲ The reading wire on weighing arm.

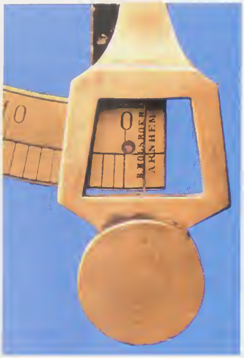


Fig. 6. The reading window.

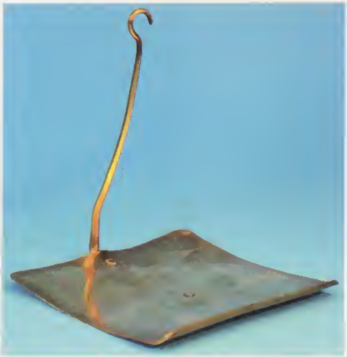


Fig. 7. The letter plate and hook.

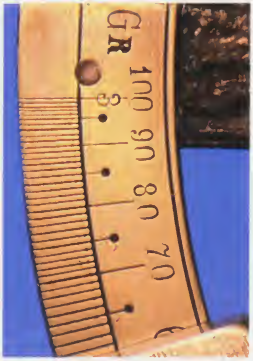


Fig. 8. End of quadrant dial..

I have not found this exact design of the Holsboer letter scale in literature. In a historical survey about Gottlieb Kern & Sohn[5] on page 10 a paper weighing scale is shown that was produced as early as 1845. This paper weighing scale also looks as if it is mounted on a laboratory stand and the resemblance to the Holsboer scale is strong.

The best feature of the Holsboer presented here, is the subtle information given on the 100 grams chart. At 15 is engraved 1, at 50 is engraved 2, and at 100 is engraved 3, see Fig. 11, Fig. 12 and Fig. 13. First I supposed this was an indication of the number of stamps to be used. Between January 1871 and March 15, 1882 the weight limits were 15, 50 and 100 grams and the corresponding postage due was 5, 10 and 15 cents or, in other words 1, 2 and 3 stamps. This way the Holsboer letter scale could be dated to the period 1871 – 1882. In the book by Mr. W. S. da Costa[6] about the postal rates of the Netherlands during the period 1850 –1990, table 1 on page 23, presents yet another possibility. In the above-mentioned table the postal rate for sending letters is indicated in cents. For the period September 1, 1855 till January 1, 1871, the presented rate up to 30 kilometers is 5c up to 15 grams, above 30 kilometers its 10c up to 15 grams, and then it reads 15-50 grams = 2x and 50-100 grams = 3 x. The 1, 2, and 3 are on the chart of this letter scale! In other words this letter scale even could be dated to the period 1855 – 1871. This would mean this letter scale is one of the oldest Dutch letter scales.

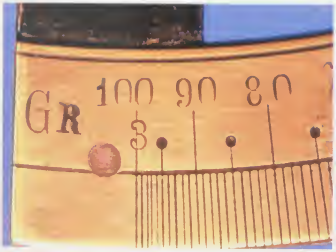


Fig. 9. Graduations near 100 g quite hard to read.

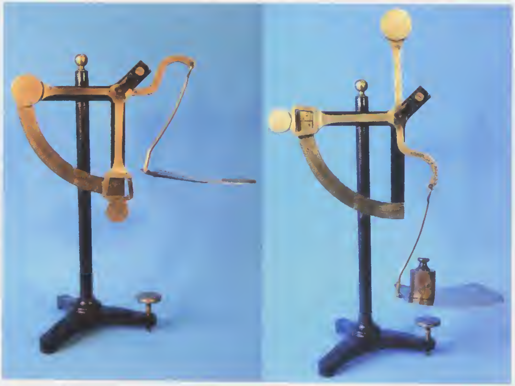


Fig. 10. Scale shown unloaded and loaded.

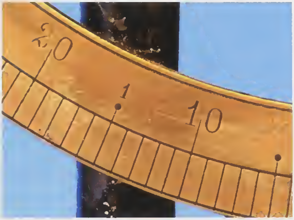


Fig. 11. ⸍⸍ 1 is engraved at 15.

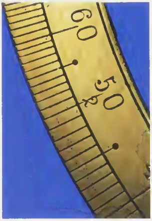


Fig. 12. ⸍⸍ 2 is at 50.

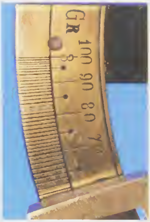


Fig. 13. ⸍⸍ 3 is at 100.

Berend Holsboer started his firm in Arnhem after the summer of 1865[2], so the period to which this letter scale dates, can be narrowed further to 1865 –1871, perhaps even to 1867 – 1871, in case the starting year is 1867 after all. Sifting out the first volume of the weekly paper "*De Opmerker*" in the Royal Library perhaps could prove the existence of the firm Holsboer for the year 1866. For the time being I decided not do this.

Supplementary information on the two Holsboer letter scales, presented earlier by Rein Kok,[1] tells us the letter scale with the capacity of 100 grams (with serial number 33) has the figure 1 at 15 g, 2 at 50 g and 3 at 100 g. The letter scale with the capacity of 200 grams (with serial number 63) has the figure 1 at 15 g. and the figure 2 at 200 g. In the period April 1, 1892 till October 1, 1908 the second postal rate limit for letters was indeed at 200 grams, the postage due was 10 cents. The postage due for the first rate group up to 15 grams was 5 cents. Therefore this 200 gram Holsboer letter scale has to be dated to the period 1892 – 1908. Kok presents on page 3016,[7] at the top right, another 200 gram Holsboer (with the serial number 79). This one has FIRMA B. HOLSBOER ARNHEM on the chart instead of B. HOLSBOER ARNHEM. It is still unknown when this addition of the word FIRMA was started.

Résumé:

The letter scale described here, made by B. Holsboer from Arnhem, is one of the oldest Dutch letter scales. In addition this letter scale has a very subtle presentation of the Dutch letter rates on the chart.

Notes:

* equerre – instrument to peg out angles and sometimes also to measure angles.

This article was first published in the Journal of the Dutch Society of collectors of Weights & Measures. In Dutch: Meten & Wegen, No. 133, March 2006, pp. 3162-3166. It was translated and slightly edited by the author.

References:

1. "Brievenwegers van Berend Holsboer", Kok R.J., Meten & Wegen, No. 113, March 2001, pp. 2688-2689 (in Dutch).
2. *Instrumenten, wetenschap en samenleving – geschiedenis van de instrumentenfabricage en –handel in Nederland 1840 – 1940*, Mooij J., dissertation Tilburg 1988, uitgave vereniging Het Instrument, 1988, 241 pp. (in Dutch).
3. *De Opmerker:* Weekblad voor architecten, ingenieurs, fabrikanten en aannemers van publieke werken, page 288 of August 9, 1884 (in Dutch).
4. *Europäischen Waagen- und Gewichtmacher und ihren Marken*, J.Schnieder & R.Bentzinger, v2.1, (in German).
5. *Preis-Verzeichniss der mechanischen Werkstätte von Gottl. Kern & Sohn*, herausgegeben vom Landesmuseum für Technik und Arbeit in Mannheim, Red. Wolf-Diether Burak, 1988 (in German).
6. *Binnenlandse en Internationale Posttarieven van Nederland 1850-1990*, Mr. W. S. da Costa, [red. C. Stapel], Assen 1990, uitgave van de Nederlandse Vereniging van Poststukken- en Poststempelverzamelaars, Posthistorische studies; 14 , ISBN 9071650065 (in Dutch).
7. "Opruiming van brievenwegers in het Postmuseum", Kok R.J., Meten & Wegen, No. 127, September 2004, pp. 3015-3017 (in Dutch).

An Unusual Mordan Postal Scale

Or has it got Irish origins?

BY MICHAEL ROBINSON

This upmarket letter scale (Figure 1), with no maker's name on any of the brass work, has many Mordan features i.e. shape and fixing of the weight and load pan legs, shape and construction of the bottom stays and an 'A' frame that was recorded as a Mordan design some 20 years ago. However it also possesses some variations I have not previously seen on a Mordan roberval postal scale. For example:

1. The weight tray (Figure 2) is a brass casting, featuring a rectangular block at the back. This incorporates two drilled and tapped holes by which the tray is fixed to the base with engineering screws inserted from beneath the base. By this means the weight tray is held 5 mm above and projecting 20 mm over the edge of the base. This makes possible the use of a small neat base that takes up minimal space on a crowded desk. Of particular interest is the way that the outer rim of the weight tray has been machined to replicate the top edge of a 4 oz bottom weight. By this means the tray is made to look like an extra weight at the bottom of the stack. (Figure 3).

2. The individualistic non-Mordan style of the convex stack of weights (Figures 3 & 4).

3. The brass base has been drilled and tapped to accept engineering screws passing through clearance holes in the 'A' frame lugs, to provide a very secure and solid fixing for the 'A' frame. The more common method for attaching the' A' frame to a brass covered Mordan base is to drive wood screws through clearance holes into a rough block of wood that fills the base cavity. On this scale a thin (3 mm thick) rectangular piece of wood is held in place by three soldered lugs thereby leaving a cavity providing clearance for any screws projecting through the brass base (Figure 5). In common with other metal-based Mordan scales, the unsightly wood is concealed with a covering of blue velvet material.

4. Surprisingly for such a top-of-the-range scale, a crudely cut-out paper label has been glued to the velvet covering. It reads:

MANSFIELD'S
MANUFACTORY &
FANCY REPOSITORY.
90 Grafton St. Dublin

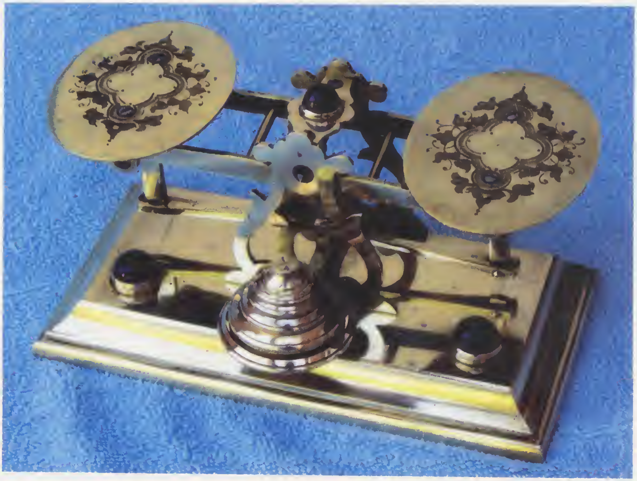


Figure 1. ➶➶ An ornate postal scale with no maker's name but the style and fitting of weight and load pan legs, also the shape of the bottom struts, are readily recogniseable as being Mordan. So too, is the 'A' frame that was recorded as being of Mordan origin some 20 years ago.

Since starting to collect postal robervals in 1970, the number of scales I have seen with an Irish connection is still in single figures! It seems that previous sightings of the Mansfield trade-mark had suggested they were purely engaged in retailing. But here we have a label suggesting that Mansfield were also manufacturers and although the scale illustrated has clearly recognisable Mordan components, the weights, weight pan and the means of fixing are, in my experience, distinctly non-Mordan in style and character.

Could it be that Mansfield's imported key scale components from other manufacturers and added their own special features to complete and market a uniquely Irish scale? Has any member got a similar Mansfield scale in their collection? Has any member got a different style Mordan scale that incorporates the special features highlighted in this article? If they have would they please contact the author at 18 Richmond Court, Spital Walk, Boughton, Chester CH3 5DA. England.

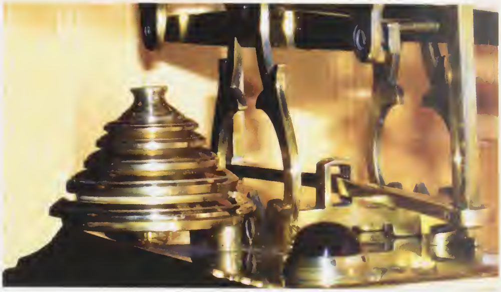


Figure 2. ↗↗ The weight tray is a brass casting incorporating a block by which it is fixed to the base. With the tray held 5 mm above and projecting 20 mm beyond the base edge, the use of a neat, small-footprint, base is possible - useful on a crowded desk!

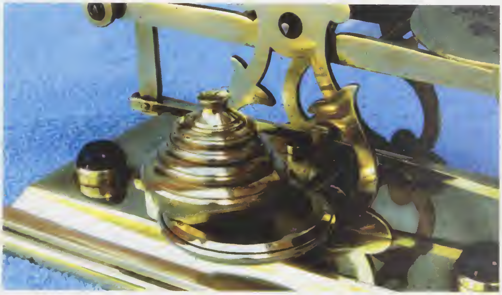


Figure 3. ↗↗ The weight stack is shown sitting askew of the weight tray, the edge of which has been machined to match the individualistic style of the weights. When the weights are correctly seated the tray looks like an additional weight.

Author's Biography:

Michael Robinson is Membership Secretary for ISASC (EUROPE) and has been collecting scales and weights for more than 30 years. His current speciality is old person scales of which he has acquired and owns a number of interesting examples.

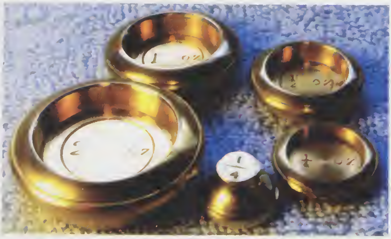


Figure 4. ↖↖ Distinctive convex weights unlike weights normally fitted to Mordan scales.

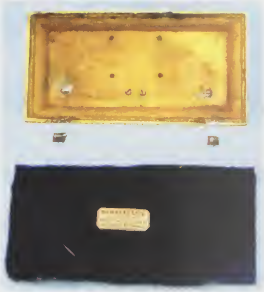


Figure 5. ↗↗ Unusually a thin velvet covered panel of wood is fitted to the base with lugs soldered to the lip. A crude label shows the supplier's name.

Number 111 August 2007

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

New Member Campaign

Congratulations to James Reeve for the outstanding job he has done this summer in offering ISASC material on Ebay. You will recall that we had decided to use our inventory of books and other material to attract new members. James has listed three flights of material over the summer resulting in selling over one thousand dollars of sales. He has sold to over 30 different people and has included with each material encouraging them to join ISASC. We have one new member and expect that there will be others. For your interest the following is the description portion of the Ebay listing. James has done a nice job of showcasing ISASC.

SALTER POSTER/1884. Reproduction, 18" x 24". Illustrations of Geo. Salter and Co. factory in West Bromwich, England, 16 assorted scales, various springs, roasting jack, etc. Handsomely printed and suitable for framing.

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS ®

Visit our website for membership info.

www.isasc.org

The International Society of Antique Scale Collectors (ISASC) was founded in 1976 to bring together collectors of scales to promote the exchange of information, foster friendships, encourage preservation, study and exhibition and to overall enhance the pleasures of collecting. There are two chapters located in North America and Europe with members throughout the world.

James will be starting college in August and will not be listing any more items on Ebay until December. We wish James success with his studies.

Trip to the United Kingdom October 2008

We are currently working with a trip planning firm to help us deal with the logistics and cost for the 2008 October trip to the UK. We should have a preliminary cost established within the next two weeks. Further details will be included in the next news letter. Over fifty of you have indicated that you would like to participate in this tour. I am sure that it will be a very interesting trip. Stay posted!

ISASC Collection Development Committee Report

Thanks to Bob Foster and Jerry and Mary Katz for their contributions of scales and ephemera to the ISASC collection. The collection continues to grow in both size and variety.

In response to my earlier newsletter indicating the small size of several categories of scales in the collection, including egg scales, Charley Amsbaugh arrived at the convention with a photographic layout of 40 scales that he felt would make a respectable beginning egg scale collection for ISASC. He kicked off this effort by donating several duplicates from his own collection. We hope to follow Charley's lead by developing similar want lists for other categories where our collection is very sparse, such as grain scales and counterfeit coin detectors.

We will also be posting on the Website a Deed of Gift which you may download and print to send along with your donation (gifts are tax deductible to the extent permitted by law). We will also be posting an information sheet on donating scales, weights, books or ephemera to the ISASC collection. Or, you may request this information by contacting Mary Anne Murphy at 412-321-5947.

We are pleased to report that a few folks stopped by Pittsburgh to view the ISASC Collection after the convention, including John and Betty Cheeseman and Don Shaw.

Jerry Wilson, a long time member of the committee and its first chair, has resigned from the committee to pursue other interests. If anyone is interested in joining this committee, please contact Mary Anne.

Midwest Scale Collectors 2nd Annual Weigh In

The second annual "Weigh In" of the Midwest Scale Collectors group will be held August 18, 2007 at the home of Don and Donna Schoenly at 260 Montclair Avenue, Glen Ellyn, Illinois, 630 858 7595, [redacted] . Everyone one is welcome, it is sure to be another fun scale collecting event.

10th Annual Michigan Scale Collectors Get-Together

October 6th 2007
At the home of Jack Mickevich,
607 East Millerton Road,
Scottville, Michigan.

You are invited to enjoy the day in the company of fellow collectors and to view not only Jack's scale collection, but also his collections of antique tractors, cars, hit and miss engines and Cass' collection of antique lamps. Also Jack has volunteered to take anyone who so desires for a ride in his antique airplane. Who could ask for more? Michigan collectors are asked to bring a dish to pass for the lunch. Out-of-state guests are exempted from this request. Plan to come early to allow for plenty of time to see it all and to enjoy the camaraderie. RSVP please by phone to (231) 757-2553 or email to [redacted] or by snail mail to the above address

Election of Officers

The term of office for Vice President Bob Jibben and Treasurer Les Firth expire at the end of the year. I am please to advise that both have agreed to stand for re-election for an additional term running from Jan 1, 2008 to May 31, 2010. A ballot will be included with the November newsletter. This election will complete the change of moving the beginning and ending dates for each term to June from December.

Upcoming Conventions

Chattanooga 2008

The 2008 convention will be held May 15th through May 19th in Chattanooga, Tennessee. Convention Chairman Phil Wehman has gathered an enthusiastic group to help him plan and implement this convention. The highlight will be the chance to see two world class collections. Certainly an opportunity not to be missed! The camaraderie prevalent at any convention is something that only increases the joy of collecting. I and all the board members encourage you to join us in Chattanooga.

Kansas City 2009

The convention committee has advised that the site for the 2009 convention will be Kansas City. A committee is now in place and plans are underway. Further details will be shared with you as they are developed. This is another great American city for us to visit. While there, I am sure we will have an opportunity to visit some outstanding collections.

Welcome To New Members

I would to take this opportunity to welcome the following new members and to encourage them to contact any of the members of ISASC should they have any questions.

Rein Kok, Deventer, Netherlands
Debbie Encisco (Gilbert) San Diego CA

Articles for Sale and Articles Wanted

In the last news letter I announced that we would include in future news letter a section where members could offer for sale or request to purchase scales, weights and other materials to and from other ISASC members.

I have received one reply. Bill Parsons of Albany NY is interested in buying sets of boxed weights. Bill can be reached by phone at 514 967 1803 or by email at [redacted].

If there are any other members who wish to take advantage of this service please submit your requests prior to the next news letter. I can be reached at peel@sympatico.ca

Who would have thought!

Question; If *you were to spell out numbers, how far would you have to go until you find the letter "A"?*

Answer; *One thousand.*

Until next time I hope you find a few good scales.

P Laycock

Peter Laycock,
President ISASC

ISASC

EQUILIBRIUM®

QUARTERLY MAGAZINE OF THE INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

2007 ISSUE NO. 4 PAGES 3293 - 3320

Cover Picture

The bases that Sampson Mordan bought in to complete his scales were many and varied. He favoured beautiful materials, such as gold, silver, tortoiseshell, onyx, Buhl-work, abalone, and this decorated 'marble'. As the inlay for the leaves is Russian malachite, it was probably made around 1850.

The people who inlaid the marble liked to illustrate real flowers, either English flowers, or exotic flowers that they were shown in the glasshouses of the Duke of Devonshire, their landlord and the person who encouraged the new art-form. He even brought home lively stones from countries that he visited, and gave them to the men when they had a particularly good idea. See the article on pages 3295-3305.

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Article submissions are preferred in MS Word with Times New Roman Font size 12. Photos are best in 300 DPI Jpegs in a separate file with a maximum of 3 photos per Email.

Matlock Marble

BY DIANA F CRAWFORTH-HITCHINS & DAVID THOMAS

Since we first saw a black marble base inlaid with white flowers, we had understood that the bases were made in Italy, and should be called *pietra dura* [literally 'hard stone']. How ignorant can one be? Here was an indigenous English style, and we did not know it!

There are several places in Britain where the limestone is so contaminated by carbon that, when polished, it has a high-gloss surface that looks like black marble. It was quarried for the decoration of country houses, to ornament fireplaces and provide a contrasting tone on patterned floors, at least from the mid-1500s. Several villages and towns in Derbyshire were near enough to the mines to have little companies working within them, including Ashford, Derby and Bakewell.

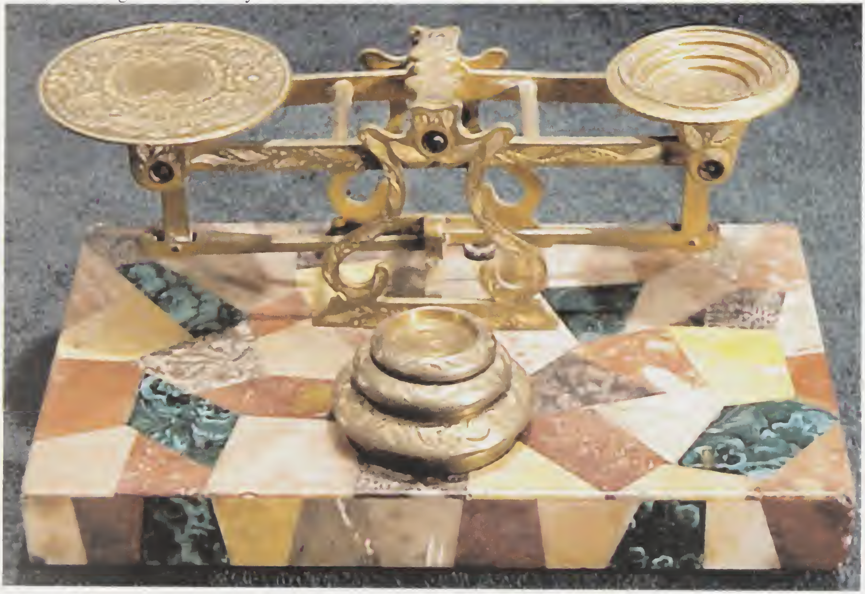


Figure 1. / / A scrapwork base on a Mordan roberval. Mordan was not content to let the jazzy scrapwork provide the decoration. The brasswork was engraved all over, making this a particularly handsome scale. The use of Russian malachite indicates that the scale was made around 1845.

But in Ashford, Henry Watson designed water-driven tools to cut, grind and polish the 'marble' (so-called throughout this article) in about 1748. This gave individual workers the opportunity to make, in their own little workshops, items such as funerary tablets, statues, vases, tables, chimney-pieces, pedestals, tazzas and candlesticks. As the carbon in the marble leeches out if exposed to the weather, all the applications were for indoor uses. The early examples were decorated with etched or engraved drawings, other shades of marble in scrapwork, or with gold ormolu.

Henry Watson's nephew introduced, in the late 1700s, a design showing the local geological strata to inform visitors about the newly-understood layering of rocks under the soil. These semi-educational decorations

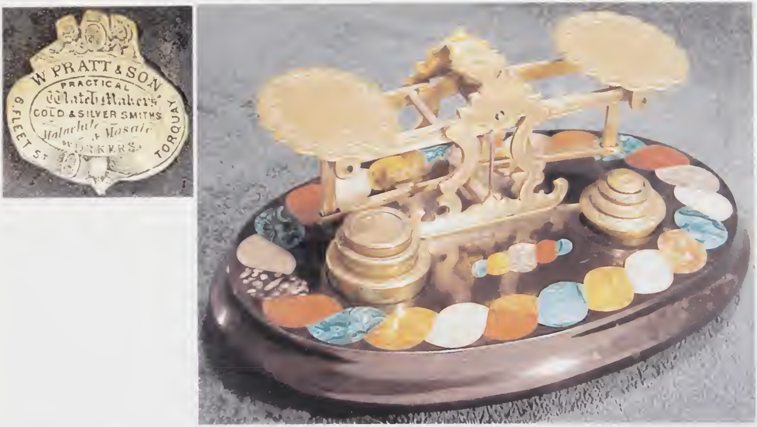


Figure 2 and 2b. Here is a nice conumdrum! This hand-some base has a paper label, 2b, stuck underneath it. The implication is that W Pratt made it entirely, but, given the style and the stones used, it is far more likely that Pratt was buying scales from either Mordan or Townshend, stamped with his name on the beam, and buying bases from the Matlock area.

This scale demonstrates how difficult it is to make categorical statements. The style of the decoration on the scale is more like Townshend's work, but the straight legs and the bracing bar between the beams are more like Mordan's work. The weights on the left are Mordan weights and the weights of the right are probably Townshend's! William Pratt states on the label that he was a mosiac worker but as he was working in Devonshire, he would have needed to gain access to supplies of the very stones that were much used in Matlock.

Many retailers ordered their scales from a real maker, and asked the maker not to put his name on the beam, but to put the retailer's name on the beam. This was not intended to deceive, but was intended to get any person who admired the scale to come to that retailer, should he want to buy one. One maker who evaded this anonymity was Samuel Turner Senior, who stamped his STS trademark on the inside of the beam, hidden away but not impossible to find.

William Pratt worked from 1856 until his retirement in 1891, earlier at 6 Fleet Street Torquay, and probably after 1871, at 13 and 14 Fleet Street. His daughter Mary Ann was living when William died in 1806, but it has proved impossible, so far, to identify his son. The scale therefore was probably made between 1856 and 1871.

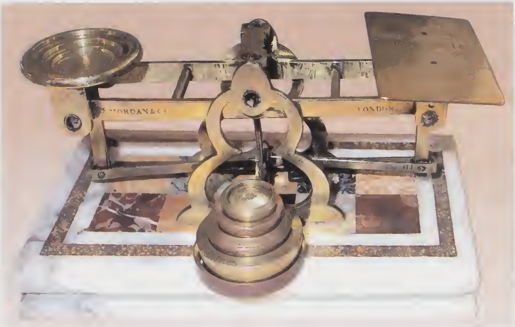


Figure 3 A patchwork base with white marble. We have been unable to ascertain whether these white marble bases were made in Matlock, but the use of the local stones strongly suggests that they were made near Matlock. The scale is a conventional Mordan scale with postal rates for 1839-71. The weights are not Mordan's. They are in a cup that protudes forward from the base.

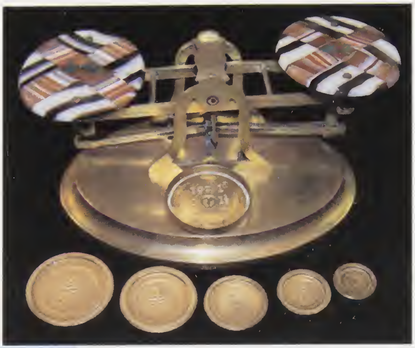


Figure 4. ↗↗ Can a scale be funny? This design made us laugh aloud! It is so unusual that we cannot be sure that it was made in Matlock, but given the stones, where else could it have been made? The scale was made by Mordan with postal rates (in the cup that holds the weights) for the period 1871-1897.

were popular, and he made over a hundred different 'pictures' showing the geology of Derbyshire.

It was not until 1834 that William Adam introduced the first pictorial mosaics in imitation of Florentine mosaics. He placed a butterfly design in the marble, using pieces of coloured stone, each forming the major element of a wing or body (as opposed to Roman mosaic that comprised hundreds of tiny pieces). He later designed birds and caterpillars. These pictorial designs met the popular enthusiasm for natural flowers and botanical subjects. Just at this time, British botanists were going on expeditions all over the world, looking for beautiful flowers, bushes and trees, from which they extracted seeds or seedlings to ship back to Britain. Botanical gardens were wildly popular, so when scales were presented with exotic flowers on them, the public bought them enthusiastically.

So from 1834 onwards, designs were made in regular geometric patterns and floral patterns, sometimes with both

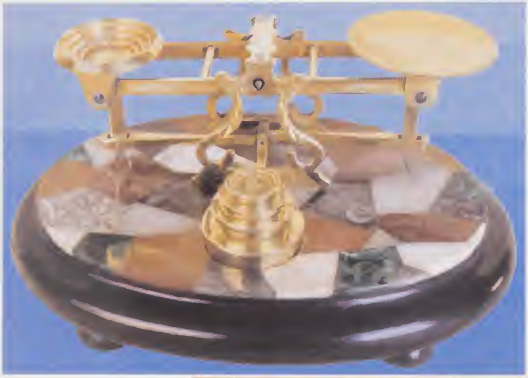


Figure 5. ↑↑ Another plain roberval by Mordan, mounted on a scrapwork base. The weights are in Postages, so were made between 1839-1871.

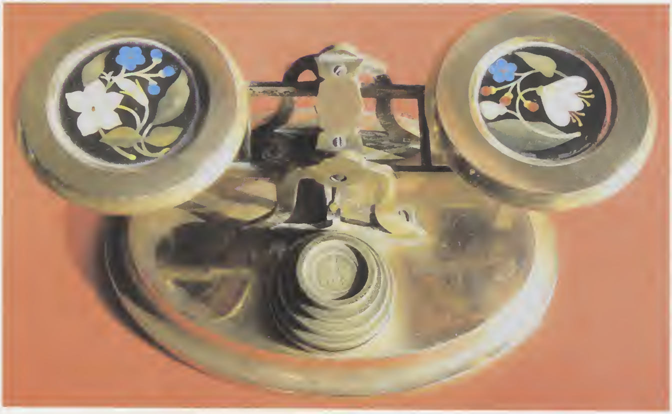
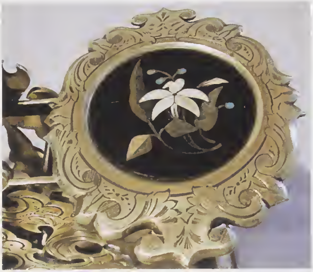
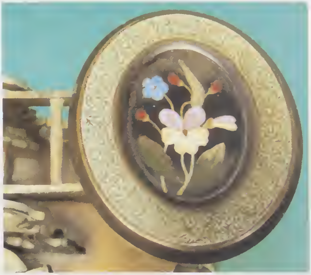


Figure 6. ↗↗ Yet another Mordan scale, with larger discs for the plates. This floral design shows the use of blue slag to create blue forget-me-nots. Coral has been used to create the buds. The green leaves were made from Connemara marble. The top-knot is missing from the stack of weights.



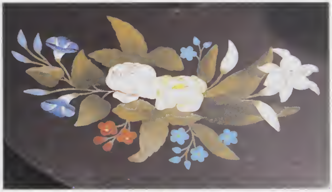
Figures 7 and 8. ↘↗ Two examples of discs used by Mordan, the left one round, and the right one oval by two different baublers (stone cutters) in different styles. Note the exceptionally elegant engraving done on the brass by two different engravers. It is assumed that Mordan employed these engravers full time, in house.



ideas on one object. It is very rare to find any two objects that have identical decoration unless they were sold as a pair. So the whole process was well-established by the time roberval and candlestick postal scales were made in the 1840s.

Method of Manufacture

The flower designs were temporarily glued lightly to a slate slab until every piece was cut, then the pieces were removed and glued lightly to the end-product marble and an engraving tool used to cut a line round each piece. The pieces were detached and the flower- and leaf-shaped holes were chiselled out by hand about $^{1}/_{8}$ ins deep. The pieces were stuck in using a warmed glue of tallow or gutta-percha, resin and plaster of Paris. The glue was rolled and warmed in the fingers, pushed into the hole, the mosaic piece pushed on top, and a small flat iron was used to warm the piece just enough to get the glue to adhere. If it was made too hot, either the stone pieces snapped, or the carbon in the



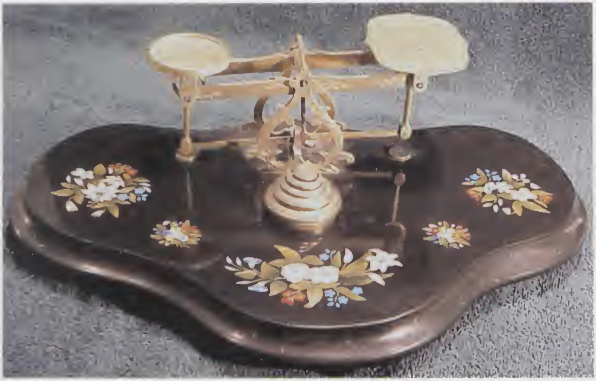
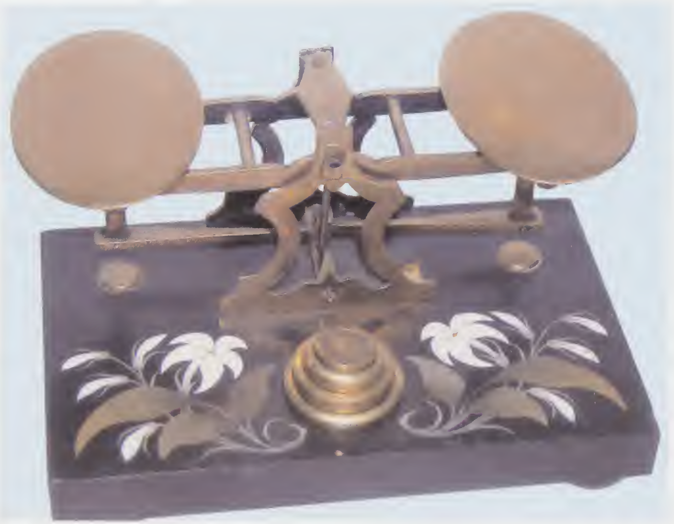


Figure 9 and 9b. ↘↗ This was made by Setten & Durward, maker in Birmingham from 1877 onwards. They aimed at a public with less money than Mordan was aiming at, but the joy of this huge base is in the botanical knowledge of the baubler. It seems probable that he resorted to the use of glass to get such vivid colours. No other example is known with five bunches of flowers.

Figure 10. ✓✓ At first glance this is a sober design, but the baubler had an exceptional gift for beautiful curves. The bend in each bud and in each stem is quite outstanding. The use of Connemara marble is well intregrated, and not shouting at the user in the way that malachite does. Mordan allowed for the discrete user as well as for the flashy user.



marble burned out. The stems were made by cutting curved lines with a V-shaped section, and filling them with a mixture of gutta-percha, ground marble and paint. Then the whole item was polished to a gloss finish.

Derbyshire craftsmen did not only use local stone. They used stones from other parts of Britain, and imported stone too. Indian Ocean shells were thinly sliced to give the whites and rosy pinks for cyclamen, white fuchsia, stitchwort, dog roses and convolvulus. Slag from blast furnaces was used to give the beautiful clear

Figure 11. ✓✓ Part of a Mordan desk set. This baubler had an exellent eye for the shading of the leaves, and a delicate touch with the white flowers. The rectangular block was a paper weight.

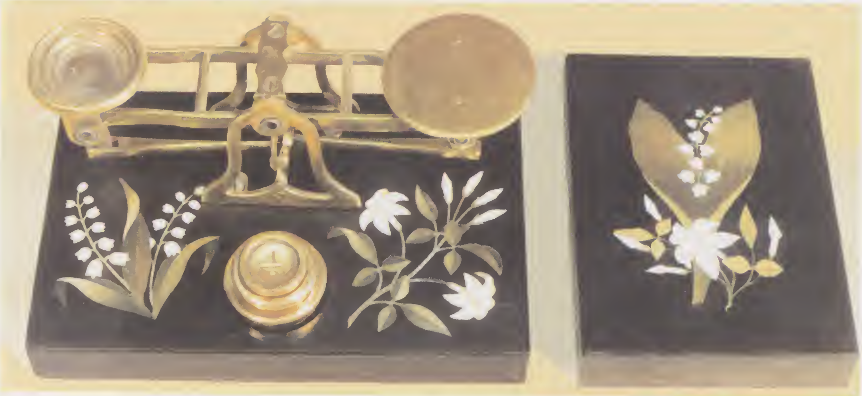
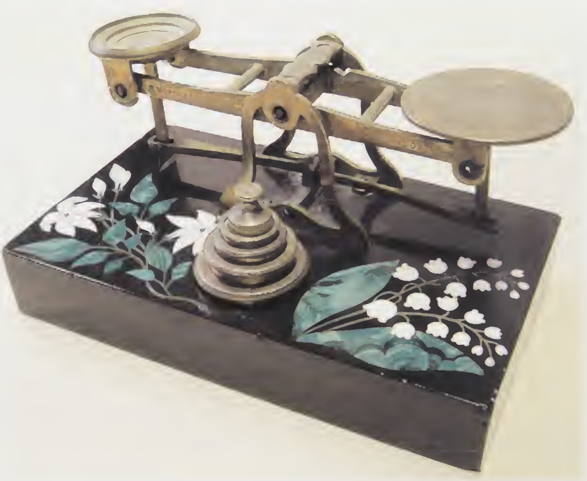


Figure 12. ↗↗ This simple design of white flowers shows off the stone inlay in a wonderful way. Mordan did not have a monopoly over the use of Matlock marble bases, but he certainly used them far more frequently than other makers. This is probably because his clientele could afford to buy such luxuries.



blue for the forget-me-nots. Leaves were earlier made from Russian malachite that was difficult to cut, (tending to shear along the lines between the shades of green), and after 1850 leaves were made from Florentine green marble which came in various greens and russets. (See Figures 7 and 10.) Connemara green marble was also imported from Ireland.

At least 16 other British stones were used, with additionally, semi-precious stones such as lapis-lazuli, turquoise, coral and mother-of-pearl. When the needed colour was not available in stone, they even used coloured glass and imitation-aventurine. (See Figure 9.) The lively designs of bunches of flowers were frequently used to form the centre of the plates on postal scales, but the 'pair' never matched, as different flowers were shown on each plate.

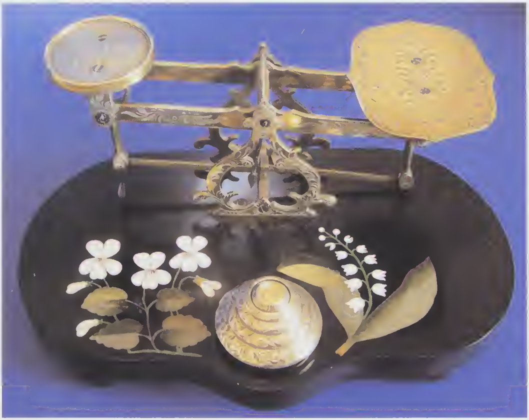
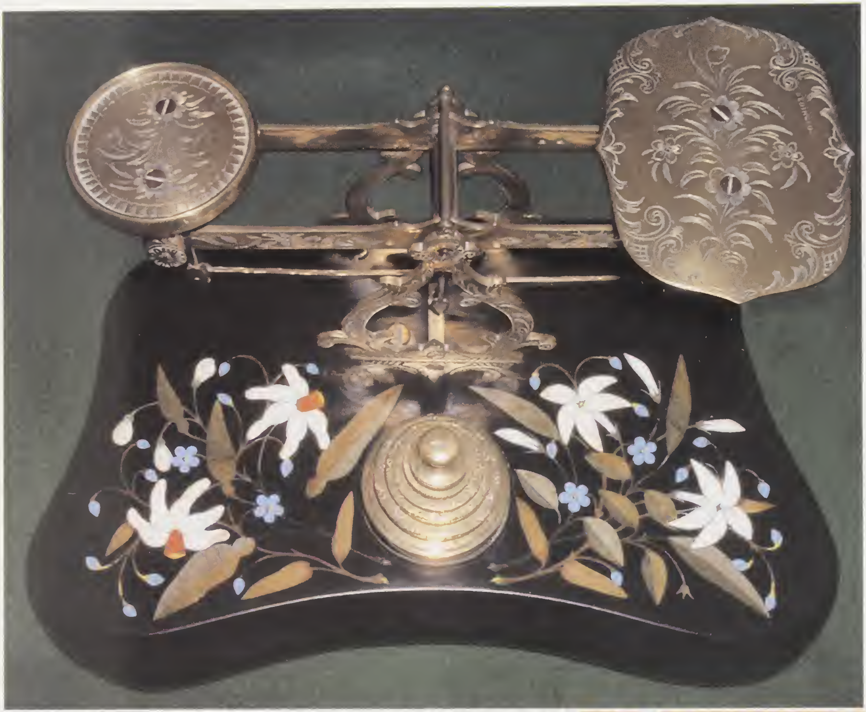


Figure 13. ↖↖ A second scale by Setten & Durward, identical to the one shown in figure 9. The base might have been made by the skilled baubler who made the base shown in figure 11, but why did he not complete the right-hand bunch of lilies-of-the-valley? Had he run out of white shell? No other example appears so lop-sided!



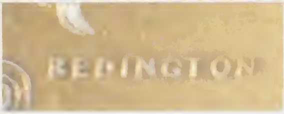


Figure 14 and 14b. ↗ → Another scale of the design in figures 9 and 13, but this example is stamped on the letter plate BEDINGTON, a name new to us. It could be the stamp of the mathematical instrument and measuring tape makers of Birmingham, (George, James I or James II,) who were working during the right period. If this is correct, they were retailing scales made by Setten & Durward, also in Birmingham.

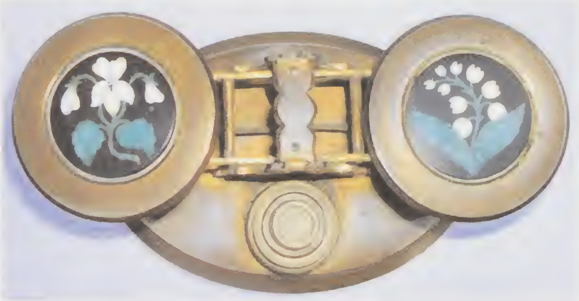


Figure 15. ↖ ↖ Mordan plated this scale with gold, but a hundred and fifty years of dusting by energetic servants has removed 90% of the gilding, unfortunately. White violets were a symbol of modesty and virtue, and associated with the fiftieth wedding anniversary. The lily of the valley was the symbol of happiness, purity and humility. How the aspirations of women have changed! Or have men's attitudes to women changed?

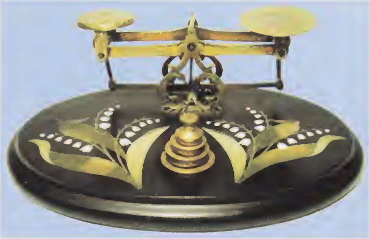


Figure 16. ↖↖ A rare symetrical base with a Setten & Durward scale

Figure 17. ↗↗ A Mordan scale mounted back-to-front on a dramatic base. This is something that occurs when the scale is cleaned by somebody who does not know that the weight plate goes on the left. At least it can easily be rectified!

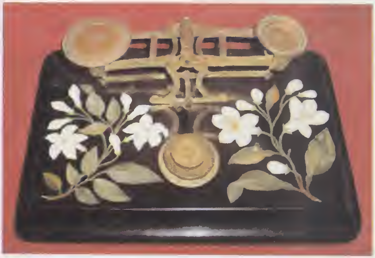
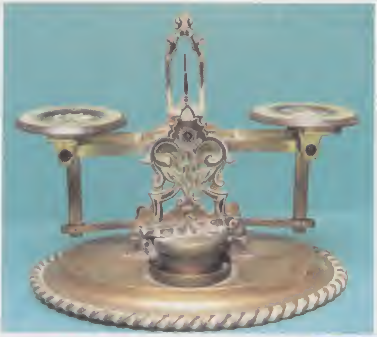


Figure 18. ↗↗ This scale appeared on ebay and caused considerable amusement. The little set of Nuremburg weights look so inappropriate on a postal scale! But the A-frame made it a very desirable piece, and it was enhanced by the marble discs.



Sometimes S. Mordan used small centres, and sometimes larger, very bold centres. (See Figure 7.)

Foreign Competition

Incidentally, according to Tomlinson,[1] Florentine methods were different, and distinguishable from Matlock marbles, being more akin to Buhl working. The Florentines temporarily glued all the pieces of coloured stone to a thin skin of marble and the two were cut through with a fret-saw. The coloured pieces were inserted into the holes in the marble and the whole skin backed by a thick slab of marble. The Florentines made the stems of the flowers out of real stone inlaid, so their stems are thicker than the narrow lines needed for the gummy mixture used for stems in England.

The way to differentiate between the two schools is to consider that Matlock marbles were never exported to Italy, and Italian craftsmen never used stones found in Derbyshire.

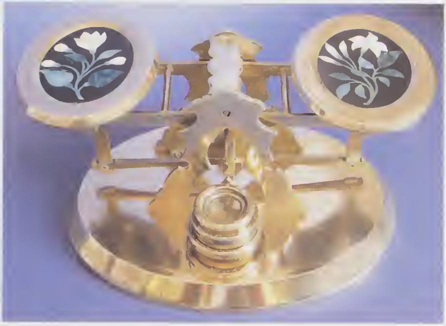


Figure 19. →→ The clean lines of this Mordan, with its unusually plain A-frame, make this one of the nicest robervals. Its simplicity allows the marble discs to stand out visually. Postal rates in the cup for 1871-1897. This proves that Russian malachite was still being imported and used after 1871.

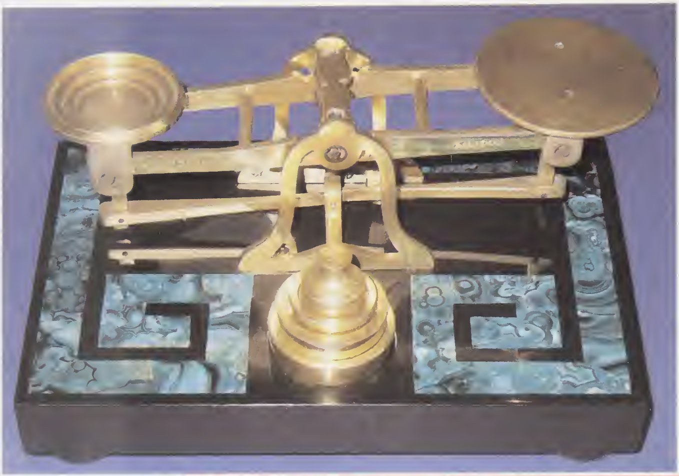
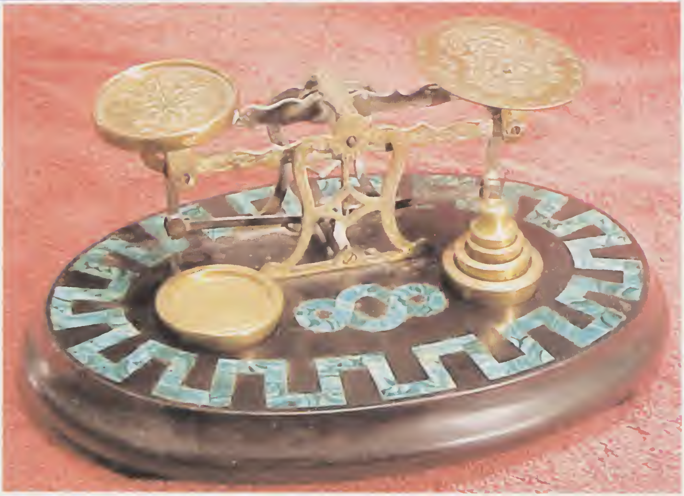


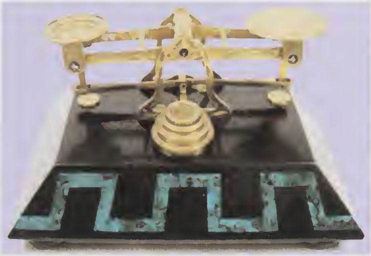
Figure 20. ◄◄ There has been a lot of discussion to try to find out whether these geometric designs were made in the Matlock area. So far, no definite evidence has been found. But would Mordan have found a separate source for these dramatic bases? The profiles of the marble are identical to known Matlock marbles. The method of construction is the same. The materials are the same. It seems likely that we are seeing a change in fashion around 1860.

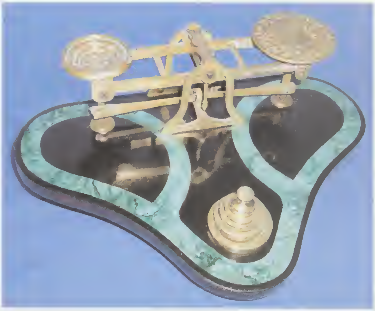
Figure 21. ►► This scale shows many characteristics of Setten & Durward's manufacturing style. One characteristic was using thin brass and then decorating it elaborately so that the customer was dazzled into buying it!



British Advertising

As the number of tourists to Derbyshire increased, the British were exposed to stunning examples of industrial art at the Great Exhibitions of 1851 and 1862, and as prestigious shops were opened in London, the demand for inlaid work escalated. At its height, there were 50 master craftsmen ('baublers' being the correct term) running workshops, retail outlets and 'museums' in Ashford, Bakewell, Buxton, Castleton, Derby and Matlock. [Museums were places where tourists could browse round, admiring the latest designs, and buying their favourites.] Large pieces of furniture were made as well as the little boxes, paperweights, vesta match





Figures 22 and 23. ◄ ► Two magnificent Mordan scales on very heavy bases. Every desk should have one!

cases, crosses, and the ink stands and pen racks that could be made into desk sets with a matching postal scale. (See Figure 11.)

Later Developments

By about 1880, a fashion for geometric decoration and more severe patterns developed in Britain. We cannot be sure that the geometric designs on bases originated then, but it seems probable. (See Figure 22.)

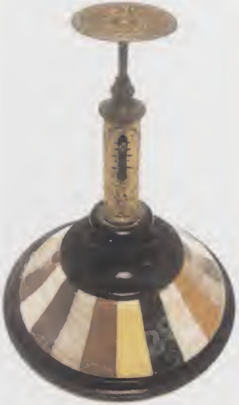


Figure 24. ▲ ▲ Makers of candlestick scales sometimes advertised their scales as combined scales and paperweights. The use of a Matlock marble base naturally made a paperweight. The letter plate is pressed with an elaborate design by an unknown maker. See EQM page 3128, fig 35.

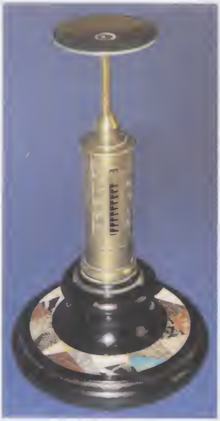


Figure 25. ▲ ▲ This design is genuine scrapwork, and might come from an early period. This was probably made by R W Winfield of Birmingham. Postal rates for 1840-1871.

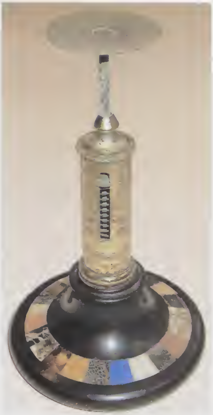


Figure 26. ▲ ▲ The tube of the scale is decorated with the impressed silk-brocade design, first used in about 1852. Brian Brass believes this to be a Winfield design. See EQM page 3128, fig. 36. Postal rates for 1840-1871.

Very few pieces were signed, and no dates given for any particular design (although a few have postal rates stamped on), so the baublers must be respected as a group, not for their individual talents. Thomas Woodruff was reputed to be the best, but we cannot say whether he made any of the pretty scale bases or letter plates in our collections.

The fashion for white backgrounds with green ornamentation developed in the late 1920s and the 1930s. Again, we cannot be sure that the scales with white marble bases were made then, or that they were made in Matlock, but it seems probable. The decline in demand came at the end of the 19th century, when tastes changed, the marble mines closed in 1905, and the last baublers retired by 1939.

Users of Matlock marble

Sampson Mordan stands out, both for his extensive use of Matlock bases and of Matlock discs. He signed many of his scales, and, even without his name, the characteristic design-features enable us to pick out his work. Setten & Durward also used Matlock marble bases, commonly engraving the brass scales to create fancy postals. The reduced thickness of the brass and the less substantial parts, combined with stylistic methods never used by Mordan, make it easy to separate the Setten & Durwards from the Mordans. One roberval is known, signed Bedington, possibly a retailer. (See Figure 14 and 14b.) The candlestick scales are usually unnamed.

Maintenance

A soft cloth, impregnated with pure turpentine (not turpentine substitute) or with natural teak oil, will clean off dirt. Do not use water.

Do not use a silicone polish. The silicone reacts with the bitumen in the limestone, leaving white patches. In the UK, use the proprietary brand *Antiquax Marble Wax*. Alternatively, boiled linseed oil can be applied, left for five minutes, then rubbed off, and polished.

Acknowledgements

The authors are very grateful to all the collectors who contributed information and pictures for this article, including Noel Scarratt, John Keenan, Ken Govier, Larry Press, Dick Axelrood, Bill Doniger, Robin Robson, Michael Robinson, Vernon Denford, Bob Stein, Ian Noble, the staff of Buxton Museum and Andrew Crawforth.

Notes & References

1 Tomlinson, J M, *Derbyshire Black Marble*, pub. Peak District Mines Historical Society, Special Publication no. 4, 1996, ISBN 0 904334 04 X.

2. Ford, T D, numerous articles in various journals, relating to Ashford Black Marble. 1958-1995.

3. Adam, W, *The Gem of the Peak*, Longman, 1838, plus 6 editions.

4. Visit Buxton Museum & Art Gallery for the best exhibits, but other museums in Derbyshire, at the V & A, and the Geological Museum in London, all show good examples.

5. Buxton Museum bought, in 2006, the collection of J M Tomlinson for the derisory sum of £20,000, with the help of the Art Collections Fund. As there were 152 items, the museum got a bargain!

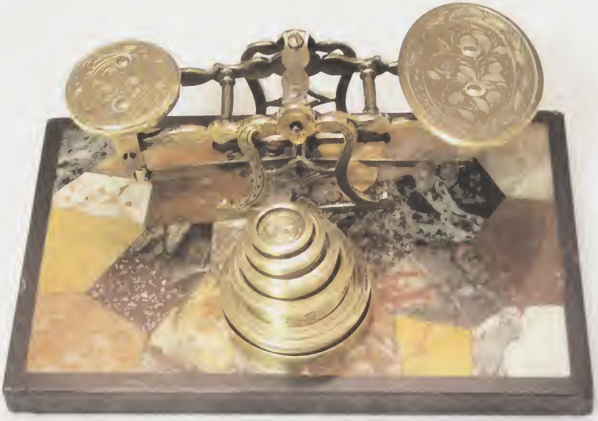


Figure 27. / / Another Setten & Durward scale on a scrapwork base. The use of a marble border gave protection to all the scraps while they were being polished. Every scrap is a stone found in Derbyshire, which makes this the perfect scale to finish with - a true Matlock marble with no foreign additions.

The Devil's in the Details – The Rest of the Story

BY CHARLEY AMSBAUGH

Those of you who were at the 2006 ISASC Convention in San Francisco may remember the Show-and-Tell talk I gave about how to tell the difference between chicken and turkey models of the same egg scale. Well, wait until you hear the rest of the story!

As I said at the convention, I not only collect egg scales, I try to find out as much about each egg scale as I can – who invented it and when, who manufactured it and where. If all the egg scales in our collections were brand new, we would find a lot of that information on the boxes they come in and on instruction sheets that come with them.

Since we are talking about antique scales, of course, those boxes and paper instructions are mostly gone, so all we have left is what we can observe on the scales themselves, or find in old catalogs and magazine ads. Sometimes that information is not readily apparent however. For instance, as was shown in EQM 2006, Issue No. 2 (pages 3140-3144), there is both a chicken model (Figure 1) and a turkey model (Figure 2) of the Zenith Pedigree Scale, or "Hanging Zenith" as the people who hang them at the nest call them.

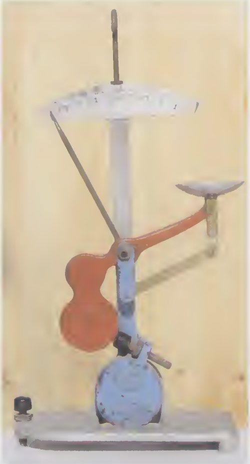


Fig 1 ↑↑ Zenith Pedigree Chicken Model.

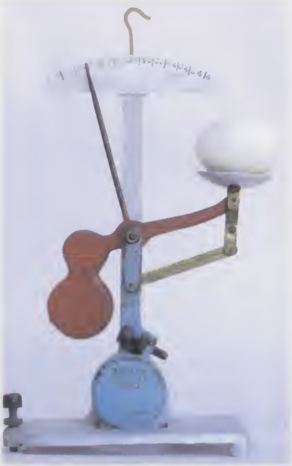


Fig 2 ↑↑ Zenith Pedigree Turkey Model

Although the counterweight on the turkey model on the right is about an eighth of an inch thicker than on the chicken model, it's not easy to see that in a picture. If you are comparing one scale to another, you might be able to see the difference; but what if you're only looking at one scale, or a picture of one scale? Then how do you tell the difference? The easiest way is to look at the graduated scale on the Zenith Pedigree, 16-32 oz. per dozen for chicken eggs (Figure 3) and 22-44 oz. per dozen for turkey eggs (Figure 4).

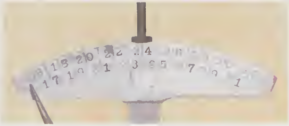
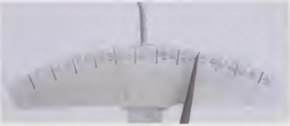


Fig 3 ↖↖ Zenith Pedigree Scale for Chicken Eggs (graduated 16-32 ounces per dozen).

Fig 4. ↗↗ Zenith Pedigree Scale for Turkey Eggs (graduated 22-44 ounces per dozen).



Sometimes the manufacturer makes it easy for us and clearly labels the turkey model, so it won't be confused for the chicken model it so closely resembles. There should be no confusion over which of these Mascot Egg Grading Scales made by the Prospectus Mfg. Co. of Minneapolis, Minnesota, is for chicken eggs (Figure 5) and which is for turkey eggs (Figure 6).

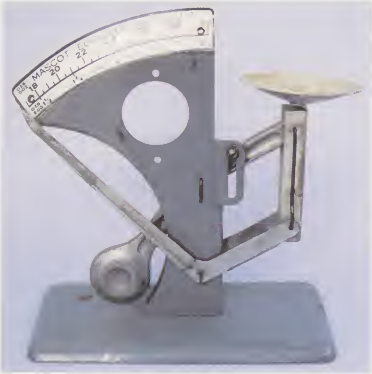
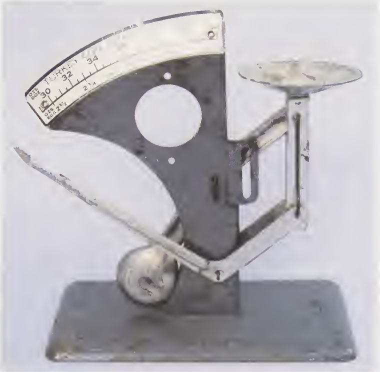


Fig 5. ◄◄ Mascot Chicken Egg Grading Scale (18-30 oz. per dozen).

Fig 6. ►► Mascot Turkey Egg Grading Scale (30-42 oz. per dozen).



The Reliable Manufacturing Company of Los Angeles, California, which later became known as the Poltriquip Manufacturing Company, Limited, made a three-generation family of "Reliable" Egg Scales. The first generation (Figure 7) had a wooden base upon which information about the egg scale and its maker was stamped in ink, the second generation (Figure 8) had a brass label fastened to the top of a metal base with that information on it, and the third generation (Figure 9) had a red and silver-colored label on a metal base.

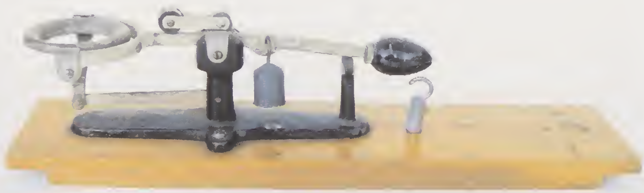


Fig 7. ◄◄ First generation Reliable Egg Scale of Los Angeles, tested 19 & 22 oz. per dozen.

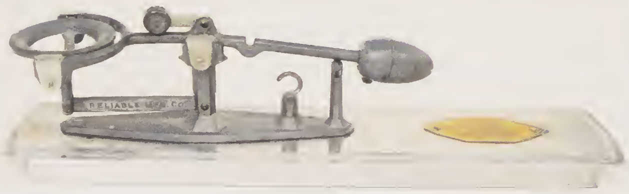


Fig 8. ◄◄ Second generation Reliable Egg Scale of Los Angeles, tested 20 & 23 oz. per dozen.

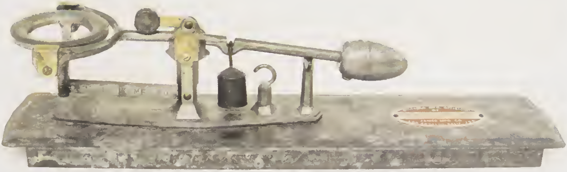


Fig 9 ◄◄ Third generation Reliable Egg Scale of Los Angeles, tested 21 & 24 oz. per dozen.

The weight range of each model is indicated somewhere on each scale. For the first generation Reliable Egg Scale, "Tested 19 & 22 oz.", which means the scale was preset at the factory to weigh medium eggs at 19 oz. per doz. and large eggs at 22 oz. per doz., was stamped along with the sales price on the top leading edge of the wooden base (Figure 10). Similar information for the second generation was included in the middle of the brass label (Figure 11). At the beginning of its production run, the second generation was preset for 19 & 22 oz. per doz. for medium and large eggs, respectively. That standard later changed, however, and second generation Reliable Egg Scales manufactured later in that production run were preset for 20 & 23 oz. per doz. The weight range of the third generation was not included on the red and silver label (Figure 12). Instead, it was depicted under "Size Specifications" on a 3"x 5" card containing "Directions for Operating Reliable Egg Scale," which was inserted inside the frame on the bottom of the scale.

Fig 10 ▲▲ "Tested 19 & 22 oz." on wooden base of first generation Reliable

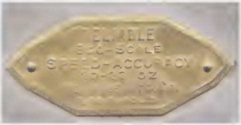


Fig 11. ▲▲ "20-23 oz." on brass label of second generation.

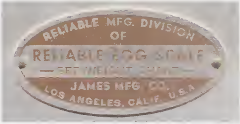
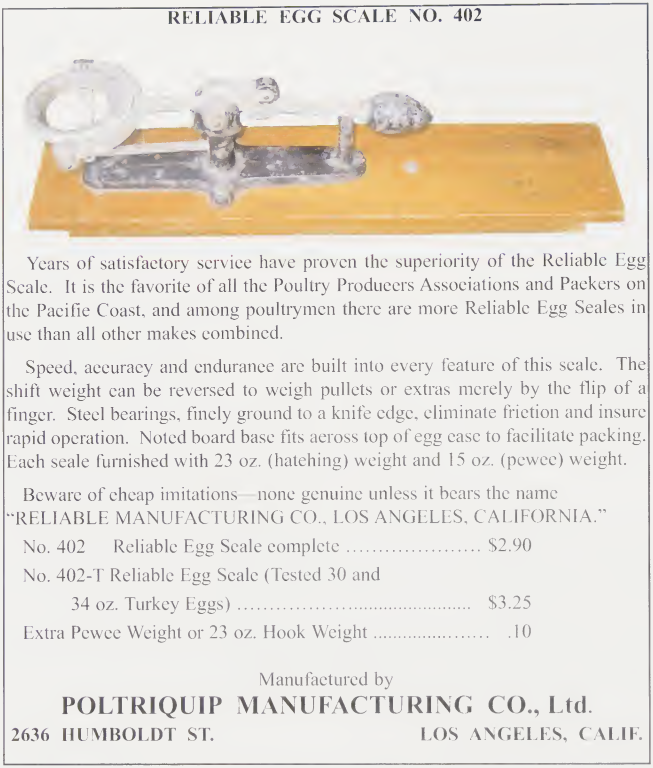


Fig 12. ▲▲ "See Weight Chart" on underside of metal base for third generation.

The night before I left for the San Francisco Convention, I happened across an old ad for a first generation Reliable Egg Scale no. 402 (reproduced as Figure 13 below). I was surprised to find reference to a No. 402-T Reliable Egg Scale, tested 30 and 34 oz. for Turkey Eggs. I had never heard of a turkey model of the Reliable Egg Scale before, and I had certainly never seen one that I recognized as such, but here was proof that Reliable was marketing a turkey egg scale in at least the 1920s and 1930s, perhaps even later. In the absence of a box or operating instructions indicating it was a turkey scale, it was obvious that we would have to pay close attention to the weight range marked on each scale. A first generation Reliable Turkey Egg Scale would have "Tested 30 & 34 oz." stamped in ink on the top leading edge of the wooden base. At the time, we didn't know if they made turkey models, as well as chicken models, for the second and third generation Reliables or not. The only way we were going to find out was to pay close attention to the weighing range of those later generation egg scales. For a turkey model, the brass label of the second generation Reliable obviously would indicate "30 - 34 oz" for a turkey model, instead of "20 - 23 oz" for the chicken model. The real problem would be the third generation, because the weighing range of the scale was not included on the red and silver label. Instead, we would have to look at the "Size Specifications" on the 3" x 5" card inside the frame of the base of a third generation Reliable Egg Scale. Specifically, if the size specification was 21 oz for "medium" and 24 oz for "large" eggs, that scale would be a chicken model. A turkey model would call for size specifications of 30 oz for medium and 34 oz for large eggs.



RELIABLE EGG SCALE NO. 402

Years of satisfactory service have proven the superiority of the Reliable Egg Scale. It is the favorite of all the Poultry Producers Associations and Packers on the Pacific Coast, and among poultrymen there are more Reliable Egg Scales in use than all other makes combined.

Speed, accuracy and endurance are built into every feature of this scale. The shift weight can be reversed to weigh pullets or extras merely by the flip of a finger. Steel bearings, finely ground to a knife edge, eliminate friction and insure rapid operation. Noted board base fits across top of egg case to facilitate packing. Each scale furnished with 23 oz. (hatching) weight and 15 oz. (pewee) weight.

Beware of cheap imitations—none genuine unless it bears the name "RELIABLE MANUFACTURING CO., LOS ANGELES, CALIFORNIA."

No. 402	Reliable Egg Scale complete	$2.90
No. 402-T	Reliable Egg Scale (Tested 30 and 34 oz. Turkey Eggs)	$3.25
Extra Pewee Weight or 23 oz. Hook Weight		.10

Manufactured by

POLTRIQUIP MANUFACTURING CO., Ltd.

2636 HUMBOLDT ST. LOS ANGELES, CALIF.

Fig 13. ↗↗ Reproduction of old ad for the Reliable Egg Scale No. 402, ca. 1930.

And now, the Rest of the Story

I returned from San Francisco on Monday evening. I took Tuesday off to recuperate before going back to work. About 9:00 Tuesday morning, I turned on the computer and brought up eBay to see what new egg scales had appeared while I was at the convention. As I was scanning the usual offerings, I didn't see anything special at first, but then I noticed that someone was selling a "Vintage Reliable Egg Scale Grader 3 - 3.4 oz.", which, of course turned out to be a second generation (brass label) Reliable Turkey Egg Scale tested for 30 to 34 oz. per dozen. A week later, the eBay sale ended and I am now the proud owner of my first Reliable Turkey Egg Scale (Figure 14). Its brass label (Figure 15) reads, "RELIABLE Egg Scale, Speed-Accuracy, 30-34 oz., Reliable Mfg. Co., Los Angeles." How's that for a coincidence?

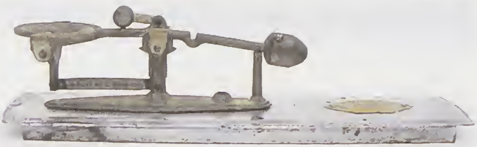


Fig 14. ➤➤ Second Generation Reliable Turkey Egg Scale.

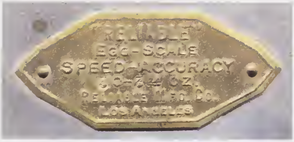


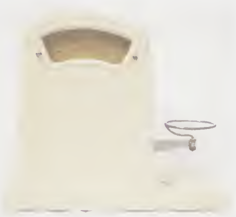
Fig 15. Brass Label for Turkey Scale, tested 30-34 oz.

Not only was that a happy coincidence for yours truly, but it also answered the question, "Did the Reliable Mfg. Co. continue offering turkey models into the second generation?" The third generation remains a mystery on this count, but we're getting there. Of course, the even bigger question remains—are there other egg scales out there besides the Reliable, Zenith and Mascot for which turkey models were made, but haven't been discovered yet by us antique scale collectors?

And the answer to that question is at least partially "yes." Several months after the 2006 convention, I was going through some research material which Bill Berning had sent to me some time earlier. According to an ad in the March 1932 issue of Poultry Tribune, the Prospectus Mfg. Co. of Minneapolis, Minn., was marketing both a chicken and a turkey model of its parking meter-shaped Mascot Egg Grader, shown at right in Figure 16. Although this is the same Prospectus Mfg. Co. which made the Mascot Egg Grading Scale discussed above and the names are very similar –Mascot Egg Grading Scale and Mascot Egg Grader– the two scales are totally different. I wonder if any of our ISASC members have ever seen a turkey model of the Mascot Egg Grader shown in Fig. 16.?

MASCOT EGG GRADER

FOR QUICK ACCURATE WEIGHT



Double graduation:
16 to 32 oz. per doz.
$1^{1}/_{3}$ to $2^{2}/_{3}$ oz. per egg. Turkey eggs:
30 to 42 oz. per doz.
$2^{1}/_{2}$ to $3^{1}/_{2}$ oz. per egg.

PRICE
POSTPAID
$2.95

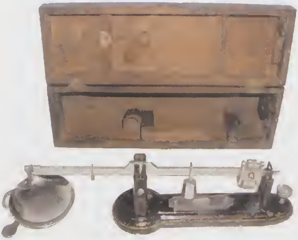
Money Back
Guarantee

PROSPECTUS MFG CO, 3 Malcolm Ave SE, Minneapolis, Minn.

Fig 16 Poultry Tribune ad for Mascot Egg Grader Chicken model (16-32 oz. per dozen) or Turkey model (30-42 oz. per dozen).

Notes & Queries

N & Q No. 156 BARBARA FISCH



I am hoping that one of our members might have a catalog listing or other data that would document the manufacturing time frame of this scale. The box is $10^{1}/_{4}$" x $3^{3}/_{4}$" and is made of black walnut with an oil finish. The lid has a keeper for the pan, and all of the other parts are stored in the bottom of the box. The base of the scale is cast iron painted black with a red and gold strip around the lower edge. The base has a level and a knob for leveling the scale. The beam has E. & T. Fairbanks & Co. stamped on the obverse left side and Patd. Aug. 20, 1878 on the reverse. The left side is graduated 0 to 250 in 5 grain increments and the right side is 0 to 6 grains in $^{1}/_{10}$ grain increments. The beam weights are permanently attached.

ANSWER From Jan Berning

Your "Miners' Assay Scale" was shown in Fairbanks' catalogs from 1902-1908. Where it was sold for $10 with the fine walnut case and for $7 without the case. The pan should be reversed.

It Pays to Advertise

BY JOHN KNIGHTS

'Please don't sit your baby on the bacon slicer; we're getting behind in our orders!' So ran the old joke about a notice, supposedly displayed in the grocer's shop. As a youth I worked in such a shop after school and even then noticed that the bacon slicer was a Berkel, the same name that appeared on the Semi-self-indicating scale standing on the counter nearby.

Built like a great horizontal steam engine the slicer had an impressively inexorable action as the great wheel was turned and the carriage slid back and forth past the spinning blade. Like all the wonderfully over engineered machines, of the past, one can only favourably compare it with the modern, puny, gravity fed device that seems to barely cope with its allotted task.

When not delivering groceries on the ancient Pashley bicycle, which needed the thighs of a powerlifter to propel it forward, I did odd jobs in the shop. When I say we used to weigh up butter and lard into irregular 1 lb lumps and put dried fruit into blue paper bags marked 'gross' it could be imagined that this was at some far removed era when there was 'trouble at t'mill' and we were all about to be shipped off to the Western front. In reality it was only some forty years ago, just as the sixties started to swing and retailing was about to change out of all recognition.

The bacon slicer represented a major complementary product supplied by the scale maker to his customer along with other, sometime essentials of the retail sector such as coffee roasters and mills (which could also grind pepper, drug indigo, cochineal and seeds of all sorts apparently) tea mixers, fruit cleaners, cheese cutters and treacle cisterns (don't ask) but in the interest of keeping his name to the fore, he would also have made a variety of other more peripheral wares that bore his name and which would be supplied to customers and potential customers.

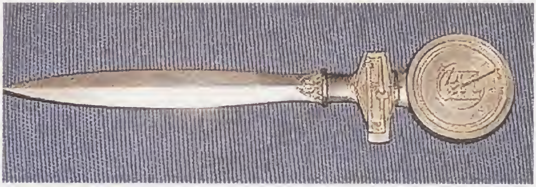
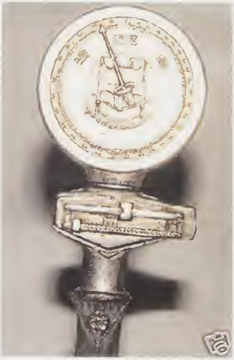


Figure 1. / / / Avery Letter Opener. This letter opener in the form of an Avery lollipop scale was a give-away to advertise Avery scales. Its use at the desk of a merchant kept the Avery name in view in the event he was in need of a new scale.



Such items seem to fall into three categories. Firstly we find the smaller items of complementary equipment sold into the retail trade, such as the ham stand, butter slab and corned beef holder, which were made in white earthenware, which prominently bore the scalemaker's name and address on an underglaze transfer. These items were akin to the ceramic scale plates; much used in the grocery and butchery trades, and were very likely made at the same pottery. Other items, that appear somewhat quaint in these thrusting times were those connected with the Shops Act legislation, designed to prevent the exploitation of retail workers. Thus there were special folding seats, designed to allow the weary shop assistant to briefly rest his, or more likely, her varicose veins and the notice declaring the statutory half-day closing; usually Wednesday or Thursday.

Users of heavy platform weighers, weighbridges, automatic machines and the like did not use such ancillary items in their businesses but still needed to be reminded of whom they should call when new equipment was required. Thus, the second category consists of items of office trivia, which were given out to such users. Some were, what would be classed as, ephemera. Diaries and calendars in particular are particularly prone to being discarded at the end of the year and therefore tend not to survive for posterity. Other items were more durable; so we still come across rulers, thermometers, bulldog clips, cash tins, clocks, perpetual calendars, letter openers etc, which bear a scalemaker's identity and would have been both useful to the recipient and served to advertise the principal products. One particular piece that has gained great cache with collectors, in the UK, is the pen/pencil holder, made in the shape of a bar weight. These were produced by Avery and other makers in the UK and were supplied to valued customers to sit on the managers' desks as a reminder of who could fulfil all weighing and measuring needs. These were also a ceramic item, which probably accounts for their current rarity and commensurately high market value.

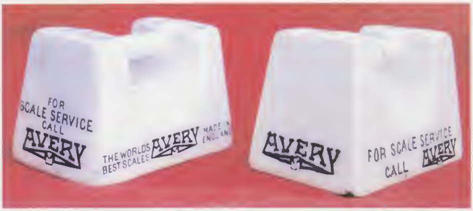


Figure 2 ↗ ↗ Avery Desk Top Pen Holder.
These ceramic bar weights were an advertising item, given out to valued customers by the Avery Scale Company. They are now, incidentally, a highly prized and expensive item for collectors of scale related items.
The left picture shows a pen holder from New Zealand and appears to be of a type distributed to overseas customers by sales representatives of the company. The item shown on the right was for UK customers.

The third category, were items of a more domestic nature, which were also used, if more indirectly as tools of marketing. Thus we find key rings, pens, pencils, playing cards, pocket-knives, nail files etc. One item that is particularly redolent of the early- and mid-twentieth century is the home bank. This was designed for children to save coins in. When full, the moneybox was taken to the Savings Bank where it was unlocked; the money counted out and paid into an account. These moneyboxes were made in novelty forms such as

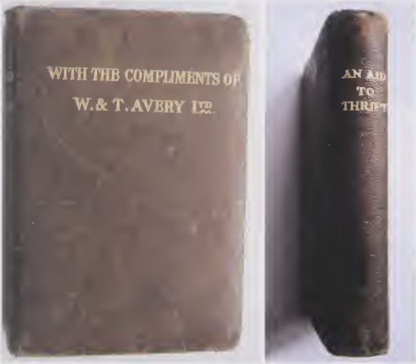


Figure 3. ← ← ↗ Savings Bank. There was a time when home savings banks were a feature of many British houses. Children would be encouraged to save coins in these banks and when they were full they would be taken to the Post Office or Savings Bank and paid into an account.
This item is a home bank provided by the Avery Scale Company. This presumably would also have acted as an advertisement for the company and would have been distributed to customers of the business. It is in the form of a book and is locked to prevent unauthorised access.
The coin slot is equipped with teeth which 'seize' the coin as it is inserted and make it almost impossible to change one's mind and withdraw the offering.
A symbol of mid 20th century middle class thrift which appears quaint and nostalgic in this plastic age.

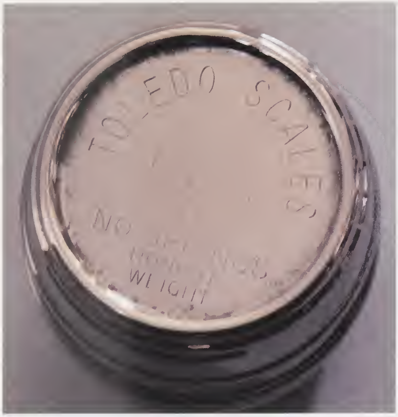
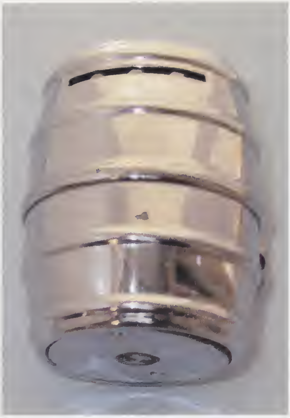


Figure 4. ↘↗ US scale companies also made items to advertise their scales. This barrel shaped bank advertising Toledo Scales measures 3$\frac{3}{4}$" tall.



leatherette bound books, which bore the name of the scale company along with a worthy message such as 'an aid to thrift'.

Advertising, in previous years could be scandalously dishonest when looked at from our modern fair-trading perspective but at least it did have a naivety and charm absent from the current heavy-handed, relentless style that afflicts us all in these days of the screen pop-up and cringingly-artful television commercial.

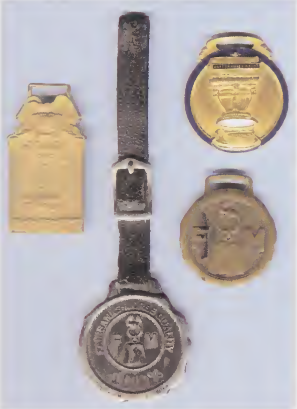
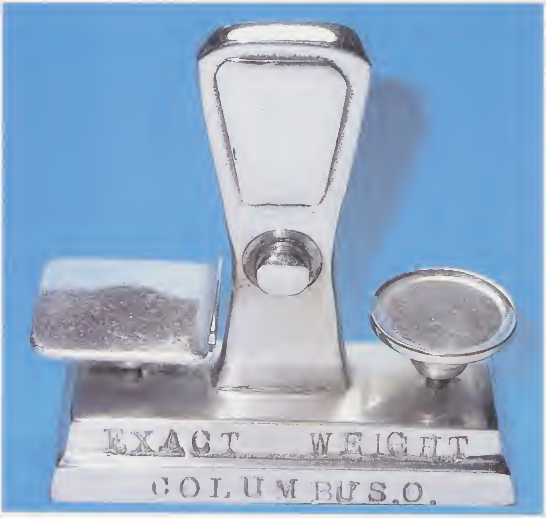


Figure 5. ↑↑ In the US Fairbanks and Dayton Moneyweight Scales advertized their scales on watch fobs which were popular from the 1800s to the early 1900s. The Dayton Moneyweight computing scales fobs shown at top are gilded and one has red, white and blue enamel on it. The Enameled fob measures 1$\frac{7}{8}$" diameter, the rectangular one is 2" long, the brass Fairbanks measures 1$\frac{1}{4}$" across and silver-colored Fairbanks is is 1$\frac{1}{2}$" diameter.

Figure 6. ↗↗ Exact Weight Scale Company of Columbus, Ohio used these paper-weights to help sell their over-under scales. It measures 2$\frac{7}{8}$" tall by 2$\frac{1}{4}$" wide and is made from heavy, highly-polished metal.



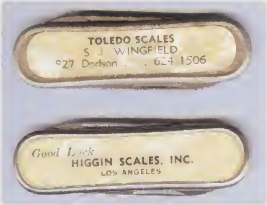


Figure 7. ↑↑ These 2 small knives advertize Toledo and Higgin Scales. They measure 2 /8" long and have a knife on each side.

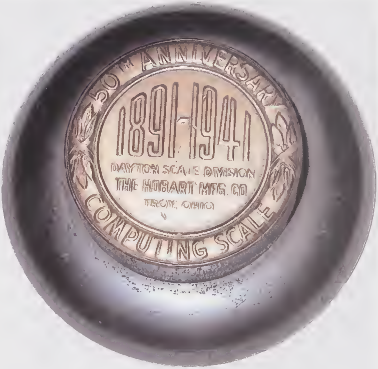


Figure 8. →→ Dayton Scale Division of Hobart Manufacturing used this copper and steel paper weight to commemorate the 50th anniversary of their computing scale. It dates from 1941 and measures 3 /4" in diameter.

Manufacturers of other merchandise also, of course also distributed their advertising wares to customers in the same way as the scale maker, but as far as trade was concerned, the scale was one of the most important tools of the business and the successful supplier had to constantly remind customers where to look for their equipment.

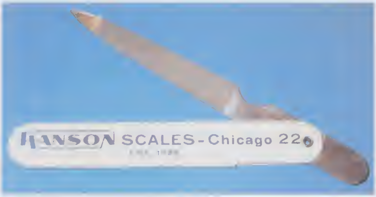


Figure 9. ↑↑ Hanson Scales of Chicago used a finger-nail file for thier advertising give away.

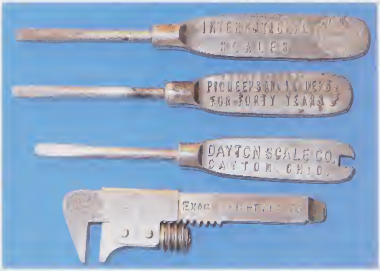

INTERNATIONAL SCALES
PIONEERS AND LEADERS FOR FORTY YEARS
DAYTON SCALE CO. DAYTON, OHIO.

Figure 10. ↑↑ American scale companies such as IBM, Dayton and Exact Weight had small, useful tools cast with their advertising on them. While the wrench is a working model, it is impractical to use but the screw driver at its handle end and the others shown here can all be used. The IBM at top measures 4 /4" long and the wrench is 3 /8" long.

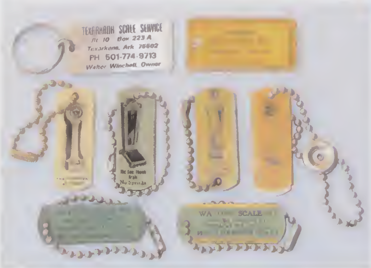


Figure 11 ↙↙ Coin-operated scale companies, such as Watling, gave away key chains showing a Watling scale on front. A tiny card inside held an operators identification information. Watling also listed their business information on back to keep it available so that operators could order more scales. Some smaller companies such as Texarcana Scale Service and operators like Arch Persons' Dixie Scale Co. had their own key tags made so that they could advertise their own businesses to sell coin-op scales.

With thanks for additional US material supplied by Jan Berning.

Scales

BY JAMES REEVE

Editor's note: This was presented as an English paper when James, our US junior member, was 15 years old and in his second year of high school.

How many times do you use a scale in a month? Scales are used every time you mail a letter, weigh yourself, buy produce or buy candy. Scales are used to weigh in science, economics, and human culture. Our everyday life depends on scales as an important tool. The many thousands of types and models of scales range from egg scales, postal scales, coin scales, to candy scales. Many companies like Fairbanks, Dayton, and Toledo exist to make scales.

Scientists use scales to weigh chemicals in experiments, etc every day. If we did not have scales our scientific advances would not be as far along as they have come today. In science everything depends on scales. In an experiment almost everything needs to be weighed in order to make detailed observations.

In economics we use scales in manufacturing, homes, and farms. In manufacturing instead of packaging the items by number, they are packaged by weight. It makes the packing process faster and more profitable. Our economy would not be as strong without scales.

In human culture we use scales to weigh ourselves or things in kitchens, on farms, and when buying produce. Every day many people step on a scale to see how much they weigh. We rely on scales so much that our advances of human culture today are dependant on them.

The three main reasons for using egg scales are to find out the size and weight of the egg and in packaging the eggs. The egg scales are used to weigh each egg individually on small farms. The four main weight sizes include: small, medium, large, and extra-large. The egg scales lined up in order from small to extra large and if the egg did not balance on the small size they then tried the medium size and so on. The scale commonly used in the mass production of egg weighing was the 'Oakes Egg Grading Scale'. One of the most common egg scales used on small farms was the Jiffy-Way egg scale which came in red or green. It also had the weight per dozen and the weight of one egg. A small egg weighed 18-21 ounces, a medium egg weighed 21-24, a large egg 24-27 ounces and extra large egg weighed 27-30 ounces[1]. Many companies advertised on the Jiffy-Way egg scale such as Farm Master, Sears and Roebuck, Montgomery Wards, and Dekalb Feeds[1]. Jiffy-Way was the world's biggest manufacturer of egg scales.

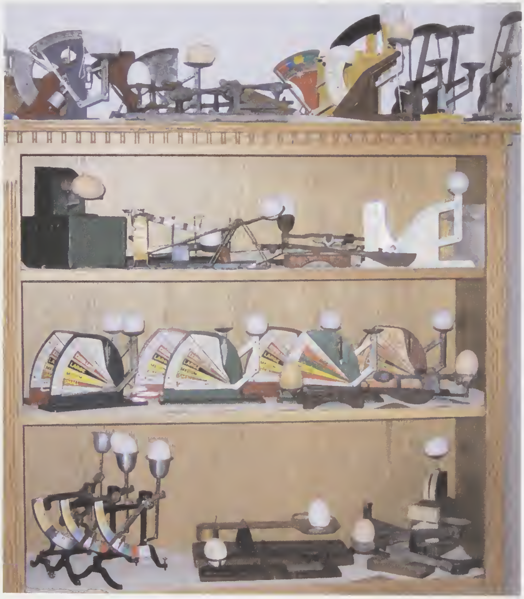


Figure 1. James Reeve's collection of egg scales.

All free weight egg scales have a leveling devise or cotter pin which helps make the reading accurate. The modern egg scales have not changed except that the newer ones consist of plastic instead of metal. Now the eggs are weighed by the dozen instead of weighing each egg.

Think of how many times you mail a letter every week. Every time you mail a letter, the letter is weighed on a scale. The postal scale came into effect with the British Postal Act of 1840 and the United States use of weighed mail in 1863[1]. The early postal scales consist of wood and brass. Some fancy scales had porcelain and had paintings on them. The weights were placed on one side and that balanced the letter for postage. In the 1940's the postal scale changed; it had a flat top and the spring would push down to the correct amount and the scale display would tell you the postage[1]. When the postal rates changed all the scales with the old rates had to be changed. This cost the postal service money to have to replace the scales every time the rates changed. The postman also carried a portable postal scale. He held it up with his finger and clipped the letter to the scale and it would swing to the weight. It saved people a trip to the post office and more people sent letters this way. With the digital, modern scales they do not have to replace the scales every time the rates change, they merely program the new rate into the scale.

You use coin scales for detecting counterfeit coins, and determining the amount of gold and silver in a coin. They can be very big like the ones that the mint used in the 1900s. People who worked for an assay office carried a small coin scale. When the gold rush happened, the coin and gold scales became a very important and needed tool. During the gold rush they used a scale called a coin rocker. If you have a counterfeit coin the scale will not balance. People went to assay offices to find out the value of their gold or silver. The assayers controlled the value of the metals. During the second gold rush, the coin scales became less needed because dollar bills were being used more than coins. Few assay offices exist in business today. The old idea of coin scales is now outdated.

When you go to a candy shop you always see a candy scale. There are many types of candy scales as well as manufacturers. One type of candy scale is commonly called the computing scale. An indicator needle goes to the amount the candy weighs and right next to the weight you have the cost of that weight. The two main manufacturers of candy scales are the Dayton Scale Company and the Toledo Scale Company. Hardware stores also used candy scales to weigh nails and bolts, etc. Another type of candy scale, similar to a kitchen scale has a flat plate instead of a pan. You commonly see these scales in a general store or a small candy shop. The modern candy scales are digital, very accurate, smaller and lighter than the older ones. Over time candy scales have not changed. You still have your weight by pound and how much the customer owes you just like the old computing scales.

Fairbanks Scales manufactured all types of scales. The company started out with two brothers, Thaddeus and Erastus Fairbanks. Thaddeus, a very smart man, invented the cast iron plow and the stove. They named their company E & T Fairbanks and started business in St. Johnsbury, Vermont. They needed a better and more accurate way to weigh items. They had an idea and used levers that helped lift a larger amount of weight. This made it easier to weigh heavier items

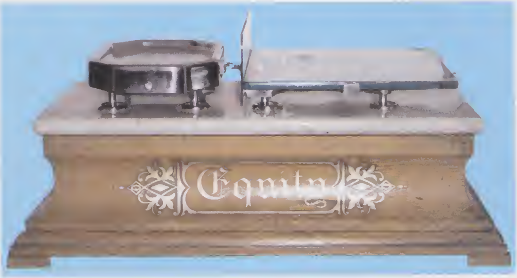


Figure 2. This Avery butchers scale is one of James' favorite scales in his collection.

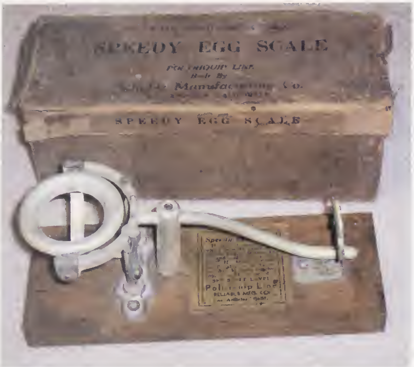


Figure 3. ↖↖ Included in James' collection is a rare Speedy egg scale with its original box and paper label.

with a smaller and lighter scale. In the structure of the platform scale, they dug a pit for the levers and placed the platform on the level ground. In 1830, soon after they invented the scale, Fairbanks went to Washington and had the scale patented. They had orders lined up before they even started to manufacture the scales. Before the Civil War all Fairbanks had was $4,000 and ten employees. The company made scales, plows, and stoves. In 1860, they had 1,000 workers and owned 40 buildings which contained twenty acres of floor space. At the end of the Civil War they produced 4,000 scales a month and the people wanted more. In 1882, 80,000 scales were produced and Fairbanks Scales held 113 patents, and had 2,000 different types of scales. In 1897, the postal service ordered 3,000 postal scales of various sizes. Fairbanks had the order completed in eight days. In the 1900s Fairbanks had 500 employees and scale offices in 49 states and 25 countries. Fairbanks Scales is still the world's biggest manufacturer of scales[2].

Over time, the manufacturers of scales have changed. In the 1900s around 15 large manufacturers of scales existed. Only three or four companies that made scales still exist today. For instance IBM Company bought out the Dayton Scale Company. Toledo Scale Company has joined with Mettler Laboratories and became Mettler-Toledo. Today only a few scale companies still exist that were around in the early1900s.

We don't realize how many times we use a scale. We use scales in manufacturing, farming, and science. Without scales the world would be chaos and factories would not have a fast way to package. Scales are one of the most important tools that people need to run their everyday lives. Next time you mail a letter or buy candy think of a scale.

Author's Biography:

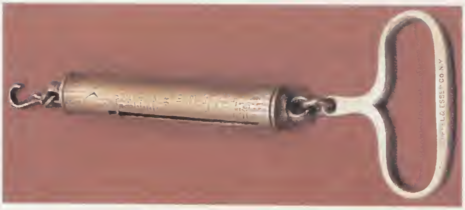
James Reeve is a 2007 graduate of Regina High School in Iowa City, Iowa and attends Kirkwood Community College as a business major. He is employed part-time as a cashier at Hy-Vee Inc. grocery store in Iowa City. James started collecting scales in 2001, when he was only 12 years old. James states: "My collection started at the Lake of the Ozarks on a family vacation. I went into an antique shop looking for a bargain for my grandparents Dave and Mary Ann Kral who have been antique dealers for nearly 30 years. On a bottom shelf there was a red accurate postal scale it was only three dollars; from there it is history. My collection has grown to nearly 300 scales".

Notes:

1. *SCALES: A Collector's Guide*, Bill & Jan Berning, 1999, 1 ed. ISBN 0764307789.
2. www.Fairbanks.com

Figure 4. ←← This small candlestick is only 3$^{1}/_{2}$" tall.

Figure 5. →→ This spring scale in James' collection is stamped Keuffel & Esser Co. N.Y. Keuffle & Esser was the dominant US maker of slide rules.

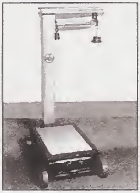


R & L Layton (Scalemakers)

BY DAVID MATTHEWS

Founded about 1912 brothers Roland & Leslie Layton.

Roland Layton was apprenticed at Fairbanks Scales in Birmingham, and also worked for the same company at Thaddeus Fairbanks Scale Co in Vermont, USA – Ernie Cook being Roland Layton's uncle and Works Manager at Fairbanks Birmingham England.



20) PORTABLE PLATFORM SCALE

Model #11

This 600 lb capacity portable platform scale was manufactured between the late 1800's and the early 1900's. The catalog guaranteed the customer the highest scale satisfaction available.

Fig. 1. (Photo from Fairbanks Scales web site.)

At this time the Wooden Pillar loose weight Steelyard platform (600 lbs) (Fig. 1) was designed and manufactured by Fairbanks and was later copied by Avery as the Model 307/3901AAG Loose weight platform steelyard. Those of us who sold this scale will recognise the amazing similarities!!

Roland returned to the UK about 1911/1912 and worked at Fairbanks in Birmingham. He then worked for William Pollard in Kings Cross London. This was when he met, his wife to be, Nellie and they were married on the 22nd February 1912 in Birmingham.

By the outbreak of the first World War the two brothers had opened their Scale company. at 7, North End Road, Fulham, and by the end of the war this charming photo (Fig.2) shows Leslie Layton on the left in forces uniform, Roland Layton behind (in typical wing collar business attire), Nellie his wife and young Ida aged about four, as she was born in 1914.

After the war, between 1918 and 1926, the R & L Layton Co. was dissolved – Leslie Layton joining the GPO and leaving Roland Layton to trade as "The Scale Mart" with, as proprietor, R. Layton. They had also moved premises to 193 Blackfriars Road, SE1, and had a punch (Fig. 3) made to stamp weight plates and brass pans and also brass stacking weights with "R. Layton 193 Blackfriars Rd." They later, in 1939, moved to 208 Blackfriars Road when Henry Pooley vacated this address to go to Railway Arches (Pooley, being the main British Rail contractor, probably gained advantageous rental terms).

The punch was modified to read "R. Layton Blackfriars Road" having ground off the 193 number, so to find both weights or pans or plates stamped with 193 Blackfriars Rd and Blackfriars Road would be odd.

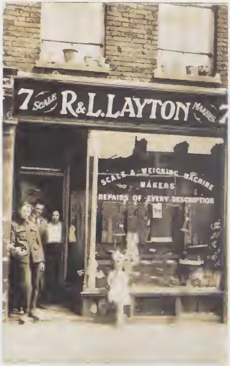

7 SCALE R&L.LAYTON MAKERS 7
SCALE & WEIGHING MACHINE MAKERS
REPAIRS OF EVERY DESCRIPTION

Fig. 2. Layton shop at 7 North End Rd.

Roland Layton's son, Roy (who has enabled me to write this brief history), took up an apprenticeship with his father, aged 14, in 1945. They continued to trade as "The Scale Mart proprietor R. Layton" until 1962, when the company merged with Hunt & Co (Scales) Ltd., proprietor Willie Hunt. The business then moved into premises at Hateham Road, Old Kent Road, New Cross. Roland retired, leaving Roy working for Hunts until 1972, when Hunts were taken over by Vandome & Hart. Roy stayed on for one year to help the transition between customer and new owners etc, and then went to work for H Fereday & Son Ltd in Holloway Road, Islington until Roy retired in 1994.

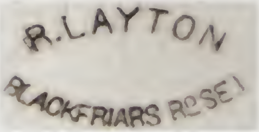


Fig. 3. Modified punch.

Worth the Weight

BY JANET C. PITTARD

In mid-18th-century Orange County, North Carolina, consumers trusted the accuracy of the local set of weights and measures to keep the scales balanced.

At one time, long before the state established its Department of Agriculture and Consumer Services to calibrate the various weights and measures used in commerce, colonial law specified that counties must possess weights and measures to serve as the standards necessary to keep tavern owners and other local merchants honest. This set of colonial weights and measures, used in Hillsborough, is one of the most complete sets known to exist in the United States today.

What is it?

The 21-piece set consists of six liquid measures (one-quarter pint, one-half pint, one pint, one quart, two quart, and one gallon); four dry measures (one-half bushel, one peck, one pint, and one quart); and nine weights (25 pound, 20 pound, 10 pound, five pound, four pound, two pound, a pair of one pound, and one bell weight).

An official Keeper of the Standard, a position maintained into modern times, was responsible for inspecting the measures each year to ensure their accuracy.

Who purchased it?

Court minutes for Orange County, now housed in the North Carolina Archives, document the acquisition of the set. In September 1758, court was held in Hillsborough, and attorney James Cary was directed to purchase a set of weights and measures from Great Britain for "a Standard as the Law Directs for this County" and "that he be paid his Charge for the same out of the County Levys." Court minutes for November 1760 duly note Cary's fulfillment of the order and his reimbursement in the amount of 55 pounds, 16 shillings, and eight pence, plus five pounds for his trouble. Some of the pieces have different markings and handles, suggesting they may not all date to 1760.

Where is it now?

The colonial weights and measures now reside in the collection of the Orange County Historical Museum in Hillsborough, [North Carolina].

About the Author:

Janet C. Pittard is a freelance writer living in Raleigh. Her brother, David Chiswell, provided research for this story.

Notes:

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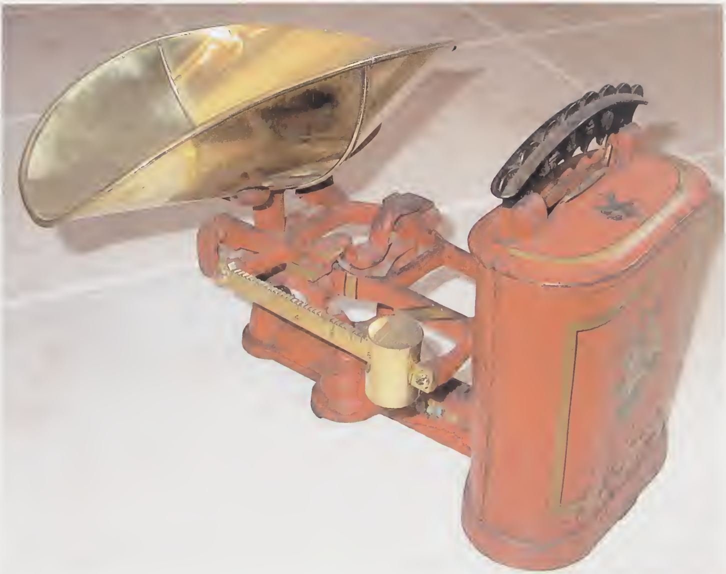
Photos by: CharlesBrownPhoto.com

Showcase



This small, size 2, Perfection scale has a capacity of only two pounds. 1½ pounds are shown on the scale dial at the top of the casing and the other ½ pound is indicated on the beam by the pointer on the poise. It was manufactured by The Perfection Scale Company of Philadelphia, Pennsylvania and can be found in several sizes.

David Hallock of New York City was issued patent number 311,745 on February 3, 1885, for a weight lifting shop scale. It is interesting that this patentee also held a patent for a weight depositing postal scale (see EQM pages 982 - 983).

Jack Mickevich & Cass Schorsch Collection.

Number 112 November 2007

ISASC

INTERNATIONAL SOCIETY OF ANTIQUE SCALE COLLECTORS

A Balanced View

Happy Thanksgiving!!

Well it is the fall of the year again. Where has the summer gone? It seems like only yesterday that we leaving Dearborn to drive home. It was a great summer in Ontario. We spent most of the time at our summer home in the Muskokas north of Toronto. We were pleased that Jan and Bill Berning could come and visit us on the first stop of their vacation. It turns out that Jan is quite a fisher person and Bill is an accomplished water skier. We enjoyed having them with us for a few days.

Election of Officers

You will recall that the process to change the start date for the terms of elected officers of ISASC to June 1 began two years ago with the election of three officers. With the election of two officers this year the process will be complete. This year and in the future the election of officers will be conducted by mail ballot. The ballots will be mailed to the membership with the fourth mailing of EQM in November of each year. This early balloting and the results of the election will allow for officers to be duly elected such that they can begin their term on June 1 of the following year. The official beginning and turn over will be announced at the annual ISASC Convention held in May of each year.

The five officers listed below have indicated that they will stand for reelection.

Vice President, Mary Anne Murphy and Vice President, Kurt Beyreis (term Jan 1 2008 to May 31 2010),

Secretary, Carol Hayden, Vice President, Jerry Katz and President, Peter Laycock (term June 1, 2008 to May 31, 2011).

Included in this mailing of your EQM and this news letter is a ballot with the five names on it. Also included is an addressed envelope. Please fill out the ballot and return it as soon as possible.

Upcoming Convention, Chattanooga 2008

The 2008 convention will be held May 15th through May 19th in Chattanooga, Tennessee. Convention Chairman Phil Wehman has gathered an enthusiastic group to help him plan and implement this convention. The highlight will be the chance to see two world class collections. Certainly an opportunity not to be missed! The camaraderie prevalent at any convention is something that only increases the joy of collecting. I and all the board members encourage you to join us in Chattanooga. Please take a moment to visit the ISASC web site to see the announcement for the Chattanooga Convention (click on 'Annual Convention' and then on 'Announcement, Chattanooga 2008').

Trip to the United Kingdom October 2008

I am pleased to report that approximately 40 of you have signed up for the trip to the UK next October. It plans to be an interesting trip packed with many scale collecting activities. Included are a trip to; the Avery Scale Museum in Birmingham, the Newark Fall Antique Fair, the Crawforth-Hitchins Collection at Oxford, the Scarratt's Collections at the Lindridge Hall Farm, the Wintour Scale and Weight Museum at Chepstow and the Fall meeting of ISASC Europe at Kegworth. The tour begins in Kegworth on October 8 and runs through to October 17. For any of you who have not yet signed up and have an interest in joining your colleagues please contact me by email at pegl@sympatico.ca or by phone at 416-226-0651

Regional Meetings

A number of areas over the past few years have held regional meetings, generally in the fall of the year so as not to be in conflict with the annual convention held in May. These meetings are a wonderful opportunity to visit with local scale collectors to enjoy an afternoon of camaraderie discussing, buying and trading scales. Regional meetings provide an opportunity for members who might not attend the annual convention to meet with other collectors. The Michigan scale collectors are old hands at this. I am sure that if anyone is interested in contacting Ben Smith or Utz Schmidt that they would be more than happy to share their successful formula with you.

Midwest Scale Collectors 2nd Annual Weigh In

The second annual "Weigh In" of the Midwest Scale Collectors group was held August 18, 2007 at the home of Don and Donna Schoenly at Glen Ellyn, Illinois. A group of six people spent a very pleasant afternoon viewing the schoenly's numerous collections of antique lighting, miner's lamps, Betty lamps, ice cream scoops and scales. Plans are underway to arrange the third meeting in July of next year.

The 10th Annual Michigan Scale Collectors Get-Together

The 10th Annual Michigan Scale Collectors Get-Together was declared a resounding success by all in attendance. This year it was held October 6, 2007 at the home of Jack Mickevich and Cass Schorsch in Scottville, Michigan. Although the main event was seeing the scale collection, there is no denying everyone also enjoyed seeing Jack's other collections of antique cars, tractors, hit and miss engines and old coffee grinders. Just goes to show that most of us are collectors at heart and take the time and effort to acquire other collections in addition to scales and weights. Rumor has it the women enjoyed seeing Cass' collection of home-made baskets and antique lamps, although there is some hint the lamps were enjoyed by both genders even if the gentlemen are not admitting to it.

It was announced the 2008 Get-Together will be held the last Saturday in August at the home of Ben and Mary Smith in Jackson, Michigan. It was moved up a bit so as not to interfere with the scheduled ISASC trip to England in October. Ben has an extensive collection of scales covering all types and enjoys showing it off to fellow scale collectors. All the Michigan members put out a hardy welcome to out-of-state guests and if you have ever hung with this group you know that the camaraderie is the greatest. It is what has kept this tradition going for so many years. So mark your calendar and plan to head up to the "Great Lake State" in late August for some scale viewing and grand fun.

Equilibrium

I think you all agree that editor Jan Berning and her support staff continue to do an outstanding job with Equilibrium. The move to color has been an impressive improvement. The continued well being of EQM, to a large degree, rests with you the members. Your knowledge and expertise on matters relating to scales and weights is considerable and is a source of material for EQM. Jan has asked me to encourage all of you to contribute to EQM by writing an article on your favorite area of scale collecting. Jan and her group are more than willing to help if you need assistance. Especially needed are articles from North American members. If you have a good idea for an article please contact Jan by email at jhberning@comcast.net or by phone at 815-895-6328.

ISASC Web Site

Carol Hayden continues to do a great job with our web site keeping it up to date. Since the last newsletter the following has been added; A write up on the upcoming Chattanooga Convention, A recap report of the Michigan regional meeting and in the members only section she has included a 'Donation Packet' to assist those members who may be interested in donating scales or other material to the ISASC Collection. Please take a moment to visit the site (www.ISASC.org). Carol would welcome any comments that you may have regarding our web site.

Welcome To New Members

I would like to take this opportunity to welcome the following new members and to encourage them to contact any of the members of ISASC should they have any questions.

Garrett Turrall, Rochester Hills, MI
F. A. Bill Norden, Kansas City, MO (Jill)
(CEO Fairbanks Scales Inc.)

Articles for Sale and Articles Wanted

In the last newsletter I mistakenly indicated that Bill Parson lived in Albany New York. It should have been Albany, Oregon. Bill would be interested in hearing from any member who may have sets of boxed weights for sale. He can be reached at by phone at 514-967-1803 or by email at bparsons@dnc.net.

If there are any other members who wish to take advantage of this service please submit your requests prior to the next news letter. I can be reached at pegl@sympatico.ca.

You are a better reader than you think!!

Don't ignore this just because it looks weird. Believe it or not, you can read it.

I cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid Aoccdrnig to rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh?

Please remember to cast your votes for the election of ISASC officers. Good hunting as you continue to look for that special scale that has eluded you.

Peter Laycock,
President ISASC